

**THE RAILWAY GAZETTE**  
A Journal of Management, Engineering and Operation  
INCORPORATING  
Railway Engineer • TRANSPORT • The Railway News  
The Railway Times • Herapath's Railway Journal • RAILWAY RECORD.  
RAILWAYS • ESTABLISHED 1835 • RAILWAY OFFICIAL GAZETTE

PUBLISHED EVERY FRIDAY

AT

33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1

Telegraphic Address: "TRAZETTE PARL., LONDON"

Telephone No.: WHITEHALL 9233 (12 lines)

## Branch Offices:

GLASGOW: 87, UNION STREET  
Telephone: Central 4646NEWCASTLE-ON-TYNE: 4, ROYAL ARCADE, PILGRIM STREET  
Telephone: Newcastle-on-Tyne 22239MANCHESTER: CENTURY HOUSE, ST. PETER'S SQUARE  
Telephone: Central 3101BIRMINGHAM: 81, EDMUND STREET  
Telephone: Central 3049

Annual subscription payable in advance and postage free

British Isles and Abroad ..... £2 5s. 0d.

Single Copies ..... One Shilling

Registered at the General Post Office, London, as a Newspaper

VOL. 90 NO. 7

FRIDAY, FEBRUARY 18, 1949

## CONTENTS

	PAGE
Editorial Notes .....	169
British Transport Commission Organisation .....	171
British Transport Commission Traffic Receipts .....	171
Irish Transport Nationalisation .....	172
Technically-Trained Railway Administrators .....	173
Letters to the Editor .....	174
The Scrap Heap .....	176
Overseas Railway Affairs .....	177
Organisation of the British Transport Commission .....	179
Rebalancing Three-Cylinder Locomotives .....	183
Personal .....	187
The North Eastern Region in 1948 .....	190
Railway Carriage Construction .....	191
Southern Region Locomotive Named "Sir Eustace Missenden" .....	193
Notes and News .....	194

## INDEX

An index to the eighty-ninth volume of THE RAILWAY GAZETTE covering the issues from July 2 to December 31, 1948, has been prepared, and is now available free of charge on application to the publisher.

## Sixth Edition

## BRITISH LOCOMOTIVE TYPES

This new edition has been completely revised and contains many additional plates. There are in all 140 outline diagrams, compiled from official drawings, giving main dimensions of all the standard and other principal classes of locomotives in use on British Railways.

Full Cloth 9½ x 6in. 148 pp.

Price 8s.

Post Free 8s. 6d.

## THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W.1.

## Transport Users' Committee

IN our December 24 issue we gave details of the personnel of the Central Transport Consultative Committee for Great Britain appointed by the Minister of Transport under the terms of the Transport Act. It has an independent Chairman and consists of representatives of agriculture, commerce, industry, shipping, labour, and local authorities, together with members nominated by the Minister and by the British Transport Commission. It is empowered to consider any matter, including charges, affecting the services provided by the British Transport Commission. In particular, it must consider any matters which arise from representations made by users of those services or referred to it by the Minister or the Commission. Its recommendations are notified to the Minister, who may act on them by giving directions to the Commission. Mr. Alfred Barnes, the Minister of Transport, was present at the inaugural meeting of the Committee, which took place in the Board Room, Euston Station, on February 15. He emphasised that it was the business and aim of the British Transport Commission to serve the public, and the consultative committees—Scotland and Wales would have their own bodies shortly—could be of great assistance in doing so. Only the user could say whether he was getting a service that satisfied him; only the Commission could say to what extent and in what way it was physically and economically practicable to meet his desires.

\* \* \* \*

## Sir Ralph Cope

Sir Ralph Cope died in his London home on February 14 in his 87th year. The whole of his record service of 61 years with the Great Western Railway was spent at Paddington. For 22 years of this time he was Chief Accountant of the company. In 1936 he received the honour of Knighthood, an act which fittingly commemorated both the centenary of the company and his own long and loyal service to its interests. His abundant vitality of mind and body on retirement in 1938 at 75 was made evident by the fact that in the following years he successfully came through two major operations. Two principal characteristics stand out in Sir Ralph Cope's long career in the railway service—his outstanding business acumen and his generosity. The first was evident to all with whom he came in contact, the second was known only to a few, as his many acts of kindness were done with an avoidance of publicity amounting almost to stealth.

\* \* \* \*

## Costly Post Office Deficiencies

The deterioration in London postal services has been the subject of comment in these columns on many occasions. In the *Evening Standard* recently some prominence was given to a letter from a large undertaking pointing out that delivery vehicles do not start on their daily rounds until the orders in each morning's post are received. Because of the late delivery of mail it has been necessary to arrange for special postal boxes so that the undertaking can collect its mail by 7.30 a.m. These facilities cost £3 10s. each and involve in total an annual expenditure of over £400. Before the war the first delivery was early enough for the lorries to be loaded with the current day's orders. Lack of early deliveries is a regular complaint against the Post Office. The Union of Post Office Workers is opposed to "split attendances." This means that men, after dealing with the early morning rush left their work and returned for the evening rush. The system was unpopular but is no more onerous than the spread-over system operated by the London busmen. The transport worker has taken a more realistic view of his obligations to the public, possibly because this service has not been nationalised for so long.

\* \* \* \*

## British Railway Investments in Argentina

The purchase by the Argentine Government of the British-owned railways operating in Argentina has resulted in a very large reduction in the amount of British investments in that country. *The South American Journal* points out that since 1934 when the total of British interests in Argentina was £453,108,833, there have been relatively small declines prac-

tically every year, but in 1948 the drop was as much as £260,989,943 to £88,145,690. It is interesting to see that the average return on the latter figure was 3.8 per cent. compared with only 1.5 per cent. on the much larger amount in 1947. Another improvement is that the amount receiving no interest has declined to 42.8 per cent. of the total compared with 60.8 per cent. in the previous year. The amount of British investments in railways is now shown at £3,513,987 and consists of the 4½ per cent. first mortgage debentures of the Buenos Aires Central Railway and the "B" stock of the Cordoba Central Trust.

#### Overseas Railway Traffic

After taking into account a £1,017,091 increase in Canadian National operating expenses, during December, net revenue was £1,550,745, or £613,152 higher than for the equivalent period of 1947. Gross revenue during the same month was £11,254,987 and brought the aggregate operating revenue for 1948 up to £122,817,487, as compared with £109,549,495 in the previous year. However, C.N.R. aggregate operating expenses advanced by £16,904,341, to £116,184,992, so that net revenue fell from £10,268,843 in 1947, to £6,632,495. South African Railways receipts for the week ended January 15, were £1,380,223, or £63,489 higher than those for the corresponding week of the previous year, and now amount to £55,704,538, since April 1, as against £52,252,458 in 1947. December traffic of the Costa Rica Railway were down by £974, at £34,398, though receipts for the half year, which total £214,237, still are £16,518 above those for the comparative 26 weeks of the previous year. At the end of 1948, International Railways of Central America traffic showed an aggregate increase of \$257,513, at \$13,333,950, though net revenue from railway operations fell by \$1,586,552 to \$2,407,724.

#### Bulldozers in Watford Tunnel, L.M.R.

Bulldozers were used for the first time in a main-line railway tunnel when the relaying and rebalasting of the fast lines in Watford Tunnel began on February 12. Both lines are to be relayed with flat-bottom track, and 5,000 tons of ballast are to be renewed. The tunnel is 1 mile 55 yd. long, and the work is to be spread over two weekends. Two relaying trains, each loaded with fifteen 60-ft. lengths of preassembled track, are being used to run a shuttle service into the tunnel, and to make return trips to Bletchley with old track and ballast. During each possession, relaying will proceed from the Watford end of the tunnel, and special relaying cranes, loaned by the Southern Region, will remove the old tracks, and lay the new sections. To keep the tunnel free from smoke, four diesel-electric shunting engines are being used to move the relaying trains. Telephone points have been established at intervals, to enable the engineers to keep in touch with a temporary control point at the Watford end of the tunnel.

#### The North Eastern Region, British Railways

Elsewhere we publish an abstract of a paper read by Mr. C. P. Hopkins, Chief Regional Officer, North Eastern Region, to the Northern Section, Institute of Transport. Mr. Hopkins began his railway career with the old North Eastern Railway and is gratified that his Region took its place, almost as of right, as an independent entity in the Railway Executive's organisation. Under the new régime, the departments inherited from the L.N.E.R. have been adjusted readily to suit the Railway Executive's ideas about uniform regional arrangements. The main changes so far have been the appointment of a Labour & Establishment Officer and a Signal & Telecommunications Engineer with separate departmental status. Preparations were made also in 1948 to transfer goods terminal work from the operating to the commercial side. On July 1 the North Eastern Region handed over to the Hotels Executive control of its hotels, refreshment rooms and restaurant-car catering. On January 1, 1949, responsibility for Hull Docks passed to the Docks Executive. Mr. Hopkins considers that all these changes have gone through without much internal friction or inconvenience to the public. He showed that his Region, which is primarily a forwarding one, did well in freight traffic last year, but local circumstances led to a sharp de-

crease in passenger travel. He foresees much to be done in co-operating with the regional officers of the Road Transport Executive. The address was a useful factual statement of transport developments in the North East during the first year of State ownership.

#### Reconstruction of Portsmouth Harbour Station

Portsmouth Harbour Station, mainland rail-sea terminal of the Southern Region Isle of Wight steamer service, was seriously damaged by air raids during 1940-41. It consists of five platform faces, six roads, a seaward terminal concourse, and two steamer berths, all on a wrought-iron and steel superstructure supported by about 250 18-in. screw piles. After the raids, only one platform and road, and one steamer berth, were usable during the remainder of the war. The work of reconstruction was described in a recent paper by Mr. A. F. Cameron, A.M.Inst.C.E., to the Railway Engineering Division of the Institution of Civil Engineers. The most interesting features of the work were the straightening out of the buckled web plates of a number of the 40-ft. main girders (buckling having been caused by incendiaries igniting the timber decking, platforms, and roofing), and the method of piling used to replace the piles destroyed. These are briefly described in the note below. The new platforms were reconstructed in concrete instead of timber, and the new overbridge was founded independently of the main structure on 16-in. x 16-in. reinforced concrete piles.

#### Straightening Buckled Girders and Pressure Piling

The straightening-out of the buckles in the web plates was effected by burning slots along the ridges of the buckles and clamping over them angle stiffeners. These were vertical in some cases and diagonally cross-wise in others; the buckle was taken out by pulling up the stiffeners with bolts, which were subsequently replaced, one by one, by rivets. Ordinary pile-driving was ruled out by the necessity for using piles at least 50 ft. long, as it was feared that the great depth of soft silt would cause any pile of shorter length to sink in and disappear under its own weight. To use so long a pile would have been almost impossible in most places, on account of the great amount of top hamper and obstructions. Also, there was no support for a pile-driving frame, and the girders, which might have carried it had there been piles under them, could not even be propped up, due to the nature of the sea bed. Consequently, resort had to be made to pressure piling with concrete-encased crossheads, from which the necessary support for the superstructure could be provided. This required comparatively little headroom and light rig.

#### Elastic Spikes in Sweden

Now that flat-bottom track, with spring-steel fastenings, has been adopted as standard on British Railways, it is of interest to note the experience of Swedish railway engineers with fittings of this type. The Swedish State Railways introduced elastic spikes on the electrified main lines from Stockholm to Gothenburg, and Stockholm to Malmö, some ten years ago, and official records show that they have given exemplary service. We are indebted to the Chief Civil Engineer, Herr Sandström, for a letter (see page 175) informing us that not more than 1 per cent. of the spikes used in the running lines have had to be renewed, and the failures generally were caused by flaws in the metal. There have been very few broken rails since the spikes were introduced, and it is considered that this improvement arises from the elasticity of the support afforded by these fastenings. On the other hand, appreciably more time is required to replace a broken rail secured by elastic spikes than one fastened with cut spikes or screws. It should be noted that the Swedish railways have the benefit of plentiful supplies of home-grown Baltic timber of excellent quality. Redwood sleepers, impregnated with arsenic salt, are used on the main lines. The average life of these sleepers is 20 to 25 years, and, as elastic spikes have been in use for only ten years, it has not yet been possible to compile comparative statistics to show the influence of different types of fastenings on the average life of the sleepers.

### British Railways Carriage Deficiency

After the reading of a paper on railway carriage construction before the Railway Students' Association by Mr. A. E. Bates, Carriage & Wagon Works Superintendent, Derby, London Midland Region, on February 9, Mr. R. A. Riddles, Member of the Railway Executive, referred to British Railways new mechanical engineering organisation. It was significant that almost as many persons were occupied in carriage and wagon construction as in locomotive building, and under the reorganisation the departments had been separated at Executive and Regional levels. Apart from various shortages, such as in steel, an important limiting factor in making good the deficiency in carriages had been the stoppage in apprentice training during the war. In January, 1948, some 14 per cent. of the carriage stock was under repair and, though it had been planned to build 4,500 coaches that year, the number constructed amounted to only 1,350; it was hoped to build 2,000 coaches in 1949. An abstract of Mr. Bates' comprehensive paper appears elsewhere in this issue.

### British Transport Commission Organisation

ON June 11 we published an account of the organisation in being at that time for conducting the British Transport Commission's work at headquarters. Elsewhere in this issue we print in full a paper on the same subject read to the Institute of Public Administration on January 31 by Mr. Miles Beevor, Chief Secretary & Legal Adviser to the Commission. This address repeated many of the statements contained in our article, but we decided to reproduce it in full because Mr. Miles Beevor gave an admirably lucid exposition of the present-day arrangements and of the reasons for adopting them. On the whole he was justified in claiming that the key-note of the headquarters organisation was directness and simplicity. We propose, therefore, to confine our comments to a few salient points which it seems worth while to emphasise or to debate.

We have stressed the importance of settling a new basis for transport charges so often that we were glad to hear of the good progress which Sir William V. Wood's committee has made with the preliminary work involved in preparing schemes for submission to the Transport Tribunal. These schemes will be the groundwork of the new transport structure under nationalisation and the Commission has been wise in deciding to formulate the proposals itself.

We venture to doubt whether the creation of a British Transport Joint Consultative Council will do much to achieve the ideal of interesting the rank and file staff in the development of transport services as a whole. On our railways the crying need is to keep alive the old *esprit de corps* which made many employees of all grades—the salt of the service—proud of their line and keen on carrying out their duties. Haste in readjusting regional boundaries and changing staff contacts is to be deprecated. One of the first principles of railway management requires officers to get about freely among the staff, especially when working conditions are difficult, and encourage the men to give of their best. Human nature is so constituted that loyalty is accorded to a live personage and not to an abstract entity. Nowadays so much of the time of many railway officers is taken up in answering queries from remote authorities, in considering questions of organisation and in attending committee meetings, that they are losing touch with their own people. Has the time not come for giving a respite from these exacting demands to an extent which would leave these overworked officers more opportunities to mix with the men who are actually handling the traffic and dealing with the public?

The relations between the Commission and its Executives formed the subject of one of the most useful parts of the address. The flow of business between the offices of the Commission and the Executives is bound to grow in volume with the passing of time. It is instructive to know something about the methods followed in dealing with the endless stream of minutes, reports and union communications. The measures taken to keep the sections of the Commission's office in contact with the corresponding branches of the Executives may prevent the stream becoming a torrent.

In commenting on the organisation set up by the Railway and Road Executives, Mr. Beevor naturally enlarged on the views expressed by his chairman on more than one occasion. We question whether things are going quite as smoothly with either of these Executives as the paper suggested. In particular, more time will be required to test the efficacy of the new railway organisation. At present there is a tendency to regard as a step forward every change from the systems of management adopted by the former main-line companies. A year or two's experience will be needed to judge the success of innovations, such as the appointment of Commercial Superintendents, with responsibility for both passenger and freight commercial business, plus goods terminal operating.

However, it is only fair to suspend judgment on many transport developments since nationalisation until there are definite results to go upon. In the meantime we are sure that the Chairman and Secretary of the Commission have done good service in speaking frankly about the principles on which the great responsibilities laid on that body by the Transport Act, 1947, are being discharged.

### British Transport Commission Traffic Receipts

THE issue by the British Transport Commission of the first traffic details for 1949, those for the four weeks to January 30, show a continuation of the declining tendency which has marked the returns for many months. Receipts of British Railways in January, at £22,568,000, were £1,049,000 less than in the similar month of 1948. The greatest decline took place in passenger revenue, which at £6,565,000 was down by £1,059,000. Merchandise and livestock at £6,407,000 declined by £367,000. There were small improvements in mineral traffic (up £262,000 to £2,378,000) and coal and coke movements (up £169,000 to £5,253,000).

London Transport receipts, as will be seen from the table below, were also lower in each category of traffic. The total of £4,192,000 was less by £77,000 than for the similar period a year ago. Including an increase of £22,000 recorded by Inland Waterways, the total traffics returned by the British Transport Commission were £26,915,000 or £1,104,000 less than a year ago.

	Four weeks to January 30		Incr. or decr.
	1949	1948	
	£000	£000	£000
British Railways (receipts from railway working)			
Passengers ... ..	6,565	7,624	- 1,059
Parcels, etc., by passen- ger train ... ..	1,965	2,019	- 54
Merchandise & livestock ... ..	6,407	6,774	- 367
Minerals ... ..	2,378	2,116	+ 262
Coal & coke ... ..	5,253	5,084	+ 169
	22,568	23,617	- 1,049
London Transport—			
Railways ... ..	1,129	1,140	- 11
Buses & coaches ... ..	2,253	2,289	- 36
Trolleybuses & trams ... ..	810	840	- 30
	4,192	4,269	- 77
Inland Waterways—			
Tolls ... ..	59	54	+ 5
Freight charges, etc. ... ..	96	79	+ 17
	155	133	+ 22
Total ... ..	26,915	28,019	- 1,104

The current issue of *Transport Statistics*, produced by the British Transport Commission, gives some further details of the Commission's gross revenue for 1948. In our January 14 issue we dealt with the receipts for the four weeks to December 26, and the aggregate for 52 weeks to that date, of British Railways, London Transport and Inland Waterways. Figures are now available for Steamships and Hotels & Catering services provided by the Commission. Steamships yielded £555,000 to December, compared with £524,000 in the same



month of 1947 and £9,601,000 (against £8,646,000) for the 52 weeks of last year. Hotels and catering also made rather more in 1948 than in 1947. For the four weeks to December 26, gross receipts were £972,000, compared with £944,000, and for the 52 weeks they were £13,293,000 as against £12,448,000.

The result of these additional earnings is to give the British Transport Commission total gross receipts of £30,793,000 in December or £424,000 more than in the same four weeks a year earlier. Over the 52 weeks total traffic receipts were £414,477,000 or £40,773,000 more than for 1947.

\* \* \*

### Ceylon Government Railway

THE report of the Ceylon Government Railway for the year ended December 31, 1947, which we have received from the Acting General Manager, Mr. M. Kanagasabay, states that the period was marked by the most serious damage by floods ever suffered by the railway. This, with a strike of workshops and running shed staff at the outset of the year, resulted in a serious loss in revenue. Total revenue was Rs. 48,349,070, a decrease of Rs. 7,959,618 on the previous year. Expenditure increased by Rs. 10,749,367 to Rs. 62,847,052. Below are compared some results:—

	1945-46 Rs.	1946-47 Rs.
Passenger train receipts ...	30,418,767	27,308,145
Goods receipts ...	23,164,697	19,092,077
Miscellaneous ...	2,725,224	1,948,848
Total receipts ...	56,308,688	48,349,070
Expenditure ...	52,097,685	62,847,052
Surplus (excl. interest and annuities payments)	4,211,003	14,497,982
	Per cent.	Per cent.
Operating ratio ...	92.52	129.99

Because of the delay in indents for imported stores, it has been impossible to catch up on arrears of maintenance resulting from the war. The steep rise in expenditure was because of increases in wages and allowances and the high cost of coal and materials. Proposals for increasing passenger fares and goods rates were put forward (approved by the Government in February, 1948). Arrival of diesel railcars in August enabled a non-stop service between Colombo, Galle, and Matara to be instituted. Additional locomotives and coaches are on order. The report was prepared by Mr. Kanagasabay, who assumed the position of Acting General Manager on March 28, 1948, on behalf of Mr. J. E. S. Bodger, former General Manager.

\* \* \*

### Irish Transport Nationalisation

THE decision of the Irish Government to nationalise internal transport, briefly recorded in our last week's issue, was an unexpected development. It was known that nationalisation of rail, road and canal agencies had been considered some time ago by the Government in the light of the grave financial difficulties facing Coras Iompair Eireann. It had been believed, however, that the trend of thought among influential Ministers in the present Government was towards the preservation of private enterprise. The decision recently announced is tantamount to the rejection of the report and recommendations made by Sir James Milne; although that report had come under heavy fire from many quarters, it was not disputed that there were aspects of it which held promise of going some way towards an amelioration of the fundamental difficulties in the Irish transport situation.

It is not unlikely that the nationalisation proposals, so far as they are known, have been framed with a view to effecting a compromise between those who favour private enterprise and those who believe that recovery can be effected through socialistic measures. *The Irish Times*, which is independent of party, thinks that this may be the reason for the promise of compensation for C.I.E. shareholders and the assurance that continued employment will be provided for those engaged in—possibly superfluous—transport occupations.

It by no means follows that, even if the Government proceeds with all-out nationalisation, all Sir James Milne's work will have been wasted. A number of the proposals he made might well be incorporated in any scheme which the Government brings forward. In particular, his suggestion for a Central Highways Authority might be adapted to meet the need for large-scale re-organisation in the Irish transport system.

It has been suggested that a compromise that retained this Authority should go a long way to satisfy the demands of Labour for the nationalisation of the public services, while it would leave the active operators of transport reasonably free to adapt themselves to needs as they arose. Moreover, the adoption of the Central Highways Authority plan would provide an evolutionary means of change and development, and would avoid the need either to frame an extremely complicated and contentious code of transport legislation, or to throw masses of traffic problems on to the Transport Board envisaged in the Government's statement.

The experience of nationalisation in England certainly does not suggest that State ownership is the panacea long promised by its advocates. It is generally expected that when the first accounts of the British Transport Commission are made public, they will show some deterioration in the overall financial position as compared with the last pre-nationalisation returns. In the framing of the new charges schemes now being considered by the B.T.C. the variation in rail and road costs is a major difficulty towards which some machinery based on the Central Highways Authority plan might prove valuable.

\* \* \*

### The Future of the Highlands

THE problem of restoring some degree of prosperity to the Highlands of Scotland received attention in a recently-published White Paper on the Distribution of Industry. In several areas there have been few of the economic developments required to provide a satisfactory way of life according to modern standards, and the younger people have drifted to the towns, or gone overseas, leaving behind a diminished and ageing population, which soon will be unable to maintain itself. The revival of Highland economy depends, to a large extent, on the development of the basic industries of agriculture, forestry, and fisheries; on the exploitation of water power resources; and on the encouragement of the tourist traffic. Much is being done, or has been planned, to achieve these ends; but there remains the problem of establishing and fostering in appropriate centres the kind of industrial development suited to such areas.

The Secretary of State for Scotland and the Board of Trade have agreed that it would be inappropriate to schedule the whole of the Highlands for industrial development, and it has been decided to select the area bordering the Cromarty and Beaulieu Firths, and including the burghs of Inverness, Dingwall, Invergordon, and Tain. Supplies of hydro-electric power will shortly be available in this district; it is situated on the main lines of communication, and the local reserve of labour can be supplemented from other districts.

The importance of the part to be played by public transport in bringing such a scheme to fruition cannot be over-emphasised. Quite apart from the proposals for industrial development (for which adequate transport is a prime necessity), the White Paper stresses the possibilities of the tourist traffic. The east coast of the Northern Highlands has considerable attractions for the visitor, while the west coast of Ross-shire and Sutherland boasts some of the finest scenery in Great Britain, and the extreme north has much to offer.

North of Inverness, the railway, and the main road, keep near the east coast, and the cross-country line from Dingwall to Kyle of Lochalsh affords the only east to west railway route. Connections to the west and north coasts are provided by bus services, which radiate from Lairg and stations on the Kyle of Lochalsh line. Train services always have been infrequent, (although those on the main line are now supplemented by the buses of the Highland Transport Company) and in many cases only one daily service in each direction is provided on the cross-country bus routes.

Through coaches are run between Edinburgh and Glasgow and Inverness by several trains, and sleeping cars and through coaches are provided on one service to and from London and Glasgow, but stations north of Inverness have never had through sleeping cars, although through coaches have been run between Glasgow and Wick.

In this connection, it is of interest to compare the Northern Highlands with the North of Sweden, an area that attracts a considerable number of tourists, although parts of it have been industrialised. Several places with populations ranging from



5,000 to 13,000 are afforded three or four services, including at least one with through sleeping cars and coaches, to and from Stockholm, 500 to 900 miles distant. Some of the towns are served by branch lines, and separate vehicles have to be provided for them. The average speeds of these services exceed those attained by the services to Northern Scotland in 1939, although the whole railway north of Uppsala (41 miles from Stockholm) is single track.

Although these Swedish towns are larger than the farthest north towns in Scotland (except Inverness), the great bulk of the population is concentrated in them. The average density of population in Northern Sweden is about five persons to the sq. mile; in the Northern Highlands of Scotland, it is approximately double that figure. Moreover, the population of Stockholm is only about 700,000; and the combined population of Southern Sweden is little more than half that of the London area. Although much of the intervening country is very sparsely inhabited, local train services in Northern Sweden are on a far more generous scale than anything that has ever been attempted in the Highlands of Scotland.

The absence of mineral wealth in the Highlands precludes the possibility of industrial development on a scale comparable with Northern Sweden, but the native industries are not inconsiderable. Quite apart from these potential developments, however, an increase in the number of summer visitors should provide sufficient traffic to justify some strengthening and acceleration of the train services, and the connecting bus services to the outlying places on the west and north coasts.

The Northern Highlands are no further from London than several popular resorts on the Continent, and the densely-populated areas of the Lowlands of Scotland, and the North of England, are appreciably nearer. A much-needed improvement is the provision of a smartly-booked through day train from London to Inverness (starting not earlier than 9 a.m.), and a corresponding return service. Despite the provision of third-class sleeping cars, the absence of this facility has deterred many tourists, who already have visited Southern Scotland, from extending their journeys further north.

\* \* \* \*

### Technically-Trained Railway Administrators

**A**N editorial in our issue of December 24 last discussed the question of incentive necessary to attract the most suitable engineers, civil, mechanical, and electrical, to railway work, and drew attention to the almost invariable selection of technical officers to fill the highest ranks in the administration of the premier railway in the United States. It may be remembered that among the views of and statements of fact published by that administration, were the following: "Many years of experience have demonstrated that graduates of good engineering schools generally learn faster, advance more quickly, and contribute more original thinking to railroad problems than any other group. Of the eleven presidents of the Pennsylvania Railroad, seven in succession have been trained engineers. Currently, four vice-presidents and three regional general managers are engineers. Likewise, virtually, all general superintendents and superintendents, as well as the higher officers mentioned above began their Pennsylvania Railroad careers as junior engineers. In the higher executive positions, including the president and department heads, more than 100 are engineers. Officers in the Operating Department . . . are drawn from men who have had basic experience in maintenance of way and maintenance of equipment."

Similar remarks apply to other railway administrations, not only in the U.S.A., but also on the Continent of Europe and elsewhere, as in many of them a high percentage of the administrative and senior executives are engineers by profession. Take, for instance, Germany before the war. The great Reichsbahn system was ably administered and worked mainly by engineers. Of the higher personnel, 65 per cent. were technically-trained men, and most of the remainder had legal qualifications; only 10 per cent. were neither engineers nor lawyers. What is more remarkable is that all District Engineers were also District Operating Officers and—to quote an official report—"the combination of civil engineering and operation under one officer is logical."

In practice, each District Engineering and Operating Officer

was responsible for permanent way, structures, signals, telegraphs and telephones, as well as train operation, including engine workings, but he was not burdened with commercial work. In this connection it is significant that all Reichsbahn officers had to pass both university and railway service examinations, and that each officer was trained in the work of all departments. There were, therefore, large numbers of comparatively young engineers entrusted with local operational executive powers, a fitting training for them as future administrative officers.

In France, too, it is usual to find many high railway executives and administrators whose names are preceded by *ingénieur* as qualified technical men. In most other Continental countries engineers are to be found in managerial positions, notably in Belgium, Holland, Italy, and the Scandinavian countries. Moreover, under the British *régime* in India, the Chief Commissioner of Railways or President of the Railway Board was almost invariably an engineer, and on Class I systems in British India it was not uncommon for 80 and sometimes even 90 per cent. of the Agents or General Managers to be engineers. In many other countries overseas the highest executives were generally technical men.

It is surprising, therefore, that in modern times comparatively few General Managers in this country came from the civil or mechanical engineering ranks. Notable exceptions were Donald Mathieson, Aspinall, Inglis of the G.W.R., Tempest, and Milne, and more recently R. J. M. Inglis, a General Manager for Scotland who was selected for the highest administrative position under the Control Commission for Germany (British Element). Most of them were of outstanding ability, and the pre-eminence of British engineers in the administration of railways in other countries makes it more difficult to understand the position on the former companies' lines at home.

There can be little doubt, however, that incentive to anything beyond a purely technical career was too often absent, partly because the young engineer was not encouraged to seek experience in the work of other departments and thus assimilate knowledge invaluable for general administration, and partly because that work was comparatively uninteresting. In regard to recruitment in the past, the engineer-graduate of such fibre as is likely to make the best administrator has generally been attracted by a natural love of adventure offered by pioneering construction work, and by the comparatively rapid promotion to the highest positions on railways overseas.

The whole situation should now be changing. With two engineers as members of the Railway Executive, there is prospect of a wider scope in railway administration for the technical man. Sir Eustace Missenden recently stressed the need for general incentive to attract the best men to British Railways and it is reasonable to suppose that his engineer colleagues are intent on securing the services of the most promising technical university graduates. The task should now be much easier than hitherto, because the railways of India and South America have suddenly become closed, or are likely to be closed in the near future, to British engineers. British Railways, therefore, have a unique opportunity to attract the most promising material, not only by offering financial and technical prospects comparing favourably with those on overseas railways and in industry generally, but also by going out of their way to encourage initiative to an extent hitherto unknown and by arranging a comprehensive course of training in railway work generally in such a way as to interest the keen young engineer. Such a training course should include the fundamentals of operation and the rudiments of work in other departments, sufficient to provide the junior technical man with a reservoir of information on the principal aspects of railway administration, on which he will be in a position to draw if his ability marks him out for high office in later years.

If all university authorities are fully informed of these added attractions, the best type of ambitious engineering student should be more favourably inclined to embark on a career on British Railways. Also, the Railway Executive will reap the benefit of having the assistance of the pick of engineering graduates throughout the country, who—with the knowledge gained by the course just suggested—will "contribute more original thinking to railway problems than any other group."

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### Professional & Technical Staff

Shoreham-by-Sea, Sussex.

February 11

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I feel that some comment is necessary regarding Mr. Heady's letter in your issue of February 11. He naturally praises the work carried out by the R.C.A. which resulted in the award of the Railway Staff National Tribunal.

What he omits to state is the time taken to obtain this award (May, 1943, to June, 1947) and the completely negative results achieved with respect to the P. & T. staff under 28 years employed on the Southern Region. No protective clause was inserted in the agreement to prevent the railway from reducing the salaries of staff, say 23 years old, from the £325 per annum they were already receiving to the £270 allotted them by the award.

Surely, Mr. Heady, this is no encouragement for new members to enlist!

Where were the P. & T. advocates of the R.C.A. when the 7s. 6d. a week award was granted? P. & T. staff have not received this award to date. In one office typists and tracers work together, both being members of the same union; typists receive 7s. 6d. a week extra, the other section looks on!

Yours faithfully,

R.C.A. MEMBER

### The Wath Road Junction Accident

Leeds, 4, January 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—As a frequent traveller over the L.M.R. line between Leeds and Sheffield, I was interested to read the report of the Wath Road Junction accident, summarised in your January 14 issue.

Apart from the excellent photograph which accompanied it, however, no mention was made of the way the wrecked coaches had "jack-knifed." I am convinced, after studying photographs, etc., of accidents on the old L.N.E.R. system, that the train would have held together had buckeye couplings been used. Compare any photographs of accidents on the L.M.R. with those on the old L.N.E.R.—nearly always the L.M.R. coaches simply fold up over each other, whilst the L.N.E.R. coaches always seemed to hold together without breaking up (that is, under derailment conditions).

Surely the time has come when the Railway Executive could equip all main-line trains with buckeye couplings as a means of lessening the accident risk?

Yours faithfully,

DICK TURPIN 4-6-2

### Passenger Fares

13, Outwood Drive,

Heald Green, Cheadle,

Cheshire, February 8

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—It seems that in my letter in your January 21 issue I misunderstood the remarks of Mr. Callaghan in regard to his comparison of 1948 and 1928 return fares, and I apologise to him.

Although I agree, of course, that 1948 monthly return fares are only approximately 10 per cent. above the 1928 ordinary return fare I would submit, with all due respect, that he has overlooked the fact that in 1928 the return fare (for longer than a day) for considerable numbers of people was either the period excursion fare or the week-end fare (both standard single fare and a third) or a tourist ticket. However, I do submit once again that the fact still remains that the fares on the general average charged today are much above the much-quoted "55 per cent. above pre-war."

In point of fact Mr. Callaghan's own argument proves my case. The "normal" return fare for journeys of not more than a day for some 425 million passengers in 1938 was that of an excursion fare. The last figures I have seen for 1948 show some 68 million excursion passengers up to the end of October and, assuming a figure of, say, 90 million for the whole year, it is obvious that many, many millions of passengers have had to pay the monthly return fare where pre-war they would have bought a cheap ticket at single fare or less for the double journey. The increase in such cases is approximately 116 per cent. at the least.

Quite apart from this fact, as your readers know, large numbers of the special excursion fares are up by much more

than 55 per cent., though, in some cases, strangely enough, the increase is less.

And what has the shortage of coal to do with the issue of cheap tickets by trains already running—often almost empty and certainly in countless cases only a little better filled?

Of a line which is being killed by (a) the poor service, and (b) the lack of cheap tickets, the Manchester to Wilmslow (12 miles from Manchester) line via Styal (pre-war a busy suburban line) is an excellent example. Even allowing that (a) may be necessary, (b) is not. The fall in traffic is tragic.

I have interested myself in this subject for some 25 years, and it seems to me nothing less than a tragedy that the railways—which could carry far more passengers than they are doing at the present time—are losing passengers steadily, and that largely by reason of the fares policy that has been and still is being pursued, though at last more and more excursion fares are being made available, but still, in my opinion, too few, too slowly, and much too late.

Yours faithfully,

ERIC DYCKHOFF

### Commodity Statistics

3, Anton-Führer-Strasse, Rheine, Westphalia,

British Occupation Zone, Germany. February 9

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In the editorial, "Commodity Statistics," in your issue of December 24, 1948, you report on the U.S.A. Commodity Statistics, linking originating areas and receiving districts, and giving tonnages for six groups of commodities, subdivided under many heads. You are right—a traffic analysis of that kind is interesting and important not so much to the railways as to all those engaged in transport, economy, commerce, politics. That region commodity statement is also supplementary to the foreign trade export and import statistics.

A voluminous statement of that kind existed in Germany since 1882. The area of the Reich was covered by 41 traffic districts; besides, there were 26 foreign countries and 108 commodities. Based on the railway figures, the statement was prepared in the former Statistisches Reichsamt and published under the title "Güterbewegungs-Stat." (Freight Movement Statistics by Commodity). An analogous statement existed for the inland waterways traffic. I gave once a history and description in my book, "Statistics and Railways," Berlin 1931, published at the time I was Director of Statistics, Headquarters, Reichsbahn, Berlin.

Yours faithfully,

K. STEUERNAGEL,  
Chief Regional Officer, retired,  
German State Railways

### Shorter Trains and More of Them

"Merok," 22, Barnhill Road,

Wembley Park,

Middlesex, February 8

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—During the past few months I have followed with very great interest your articles on "Shorter Trains and More of Them," in which you have dealt with the broad outlines of revised main line passenger train services over most of the important traffic routes in England and Scotland. I feel sure that if drastic timetable revisions of this nature were undertaken they would be a great benefit to the travelling public in general, with their provision for improved connections from the lesser, but still important, traffic centres, also their systematic departure times and generally improved spacing throughout the day, in place of the present timetables. These, in some cases, seem to be little more than the pre-1923 grouping timebooks, with alterations as necessary sandwiched into the existing timetable set up to meet, one feels, the convenience of the operating departments rather than the travelling public.

Although giving due credence to the importance of the operating viewpoint, one cannot help feeling that this frequently outweighs that given to the claims of the travelling public which, after all, is the "buyer" of the transport commodity of which the railways are the "sellers." In this connection, the theory is often advanced that the inclusion of new services at times quite distinct from old-established ones will not meet with public support.

Although it is obvious that travel demands vary at certain times of the day, one feels that the theory mentioned is often advanced as an excuse for doing nothing; after all, it is pure speculation to say that services at new times of the day will not meet with public support when the public in some cases (such as the 10 a.m. departures for Scotland from Kings Cross and Euston) has never been offered such alternative facilities

to give its support to. In any event, we must hope that those in authority will see the virtues of the principles which you have elaborated in these articles and find their way to applying them in practice.

Whereas the general principle of shorter trains and more of them does not apply in the same degree to the services from St. Pancras and Marylebone, which in general are of moderate loading only, you mentioned in your initial article of the series that acceleration and better spacing were required to give the places dependent on these routes some equivalent of their pre-war service.

It is to be hoped that some early action may be taken by those responsible to improve the all-round composition of these services, which compare poorly with those given before the war and with comparable services radiating in other directions from London, as, for example, on the former Great Northern main line, where loading is a good deal heavier.

Yours faithfully,

GEORGE W. CARPENTER

### Elastic Spikes in Sweden

Kungl. Järnvägsstyrelsen  
(Royal Administration of the  
Swedish State Railways),  
Stockholm. January 10

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Our experience with elastic spikes is that we introduced them ten years ago on the electric traction main lines, Stockholm-Gothenburg and Stockholm-Malmö. During these ten years about 1 per cent. of the spikes have broken in the track and have had to be renewed. The cause of break has generally been a flaw in the manufacture. Any replacement of elastic spikes beyond that has not been necessary.

Only a few rail breakages have occurred in track with elastic spikes. It is more time-consuming to change a broken rail that is fastened by elastic spikes than a rail held by cut spikes or screws, but, owing to the elastic support, we count upon a lower frequency of rail breakage in track with elastic spikes.

Under good conditions an elastic spike can be re-used in an old hole. If a satisfactory hold is not obtained, the spike is driven through a hole in reserve, or else the baseplate is moved a little and new holes are bored in the sleeper.

In old sleepers there is a tendency for the spikes to work loose, depending on the fact that the material of the sleepers is becoming softer as time goes. By using the methods mentioned in the previous paragraph, it should be possible to make full use of the life of the sleeper.

On sections with elastic spikes, sleepers of redwood, generally impregnated with arsenic salt, are used. The average life of these sleepers is calculated to be 20-25 years. As elastic spikes have been used by the Swedish State Railways for only 10 years, material of comparison does not exist yet concerning the influence of different fastenings on the average life of the sleepers.

Yours faithfully,

H. SANDSTRÖM,  
Chief Civil Engineer

### Modern Swiss Electric Locomotive Performance

c/o McCracken, 38, Third Avenue,  
Renfrew, Renfrewshire. January 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—I was greatly interested in Mr. Cecil J. Allen's article on this subject in your issue of January 28, as my own experiences with the Swiss Federal Re4/4 locomotives had been among the highlights of a trip to Switzerland made in September, 1948.

My most entertaining run was on the 12.30 p.m. Geneva to Lausanne, the fastest of all the Swiss bookings, when No. 422, with seven coaches of about 190 tons tare, passed Versoix (5.2 miles) in 5 min. 23 sec., Coppet (8.2 miles) in 7 min. 58 sec., Nyon (13.5 miles) in 11 min. 58 sec., Rolle (21.0 miles) in 17 min. 43 sec., Morges (29.6 miles) in 25 min. 13 sec., Renens (34.6 miles) in 30 min. 53 sec., and stopped at Lausanne (37.4 miles) in 34 min. 4 sec., as against 34 min. booked.

At this time a very severe slack to about 5-10 m.p.h. was in force through Morges in both directions as a result of constructional work of some sort being carried on under the tracks, and I estimate that this caused a loss of three minutes, making the net time 31 min., or 72.4 m.p.h. start to stop. It was interesting to note that the average speed from Coppet to Rolle was 78.8 m.p.h. over the distance of 12.8 miles.

Over the Lausanne-Berne section, a run on the 8.48 a.m. southbound train with No. 422 produced a time of 68 min. 21

sec., as against 72 min. booked, while in the opposite direction, on the 6.0 p.m. from Lausanne, the 75-min. booking was cut to 72 min. 17 sec., including 19 sec. over the two-minute stop at Fribourg. The formidable climb out of Lausanne provided little trouble to No. 412—one would not object, indeed, to spending several minutes more on this section, which must be one of the finest scenic sections on the Swiss Federal Railways.

I was intrigued by the prospect of a 3-hr. booking from Zurich to Geneva mentioned by Mr. Allen. In 1947 one booking each way of 3 hr. 10 min. was introduced, but these, unfortunately, have required to be eased to the times mentioned by Mr. Allen. The most difficult section is apparently the Zurich-Berne run, which, although easily graded according to Swiss standards, suffers from severe service slacks and sharp curvature, sometimes of a reverse character. On my only run on this section, on the 5.37 p.m. from Zurich, a 93-min. schedule was cut by 49 sec., and the 15½ miles from Langenthal to Burgdorf was accomplished at slightly over 60 m.p.h. average, in spite of slacks at each of the stations mentioned and a generally rising tendency.

Yours faithfully,

FRED. A. PLANT

### Transfers of Clerical Staff

Edinburgh. January 25

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—I have been surprised to note that to date there has been no comment in this column regarding the proposed transfer of railway clerical staff from Edinburgh to Glasgow.

I can assure you, however, that much is being said in the Edinburgh offices and I would like the Members of the Railway Executive to come to Edinburgh and hear these comments themselves. While I am sure that they would not find this flattering they would realise perhaps that when the British Transport Commission made them responsible for the railway management they were not given the right to dictate the personal lives of the staff, as they seem intent on doing.

Yours faithfully,

CUANTO LE GUSTA

### Public Relations and Publicity

St. James's, S.W.1,  
February 14

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Doesn't the booklet reviewed on February 11 amount to this—"it doesn't matter what railway officers do; the thing that counts is what the Public Relations & Publicity people think and say about them."?

Just 2,200 odd years ago, Callisthenes, the first Public Relations Officer on record, spoke almost the same words about Alexander the Great, whose Asiatic expedition he had been chosen to write up. The legend ran that the pride of the young Greek publicist was quenched by stoning him to death. His was a hard fate for forgetting the precept of another older Greek that "modesty is the citadel of beauty and virtue"!

Yours faithfully,

CLUBMAN

### A Passenger's Lament

February 14

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—During the past few months *The Railway Gazette* has treated us to many descriptions and delightful illustrations of stations, buffets, coaches, and restaurant cars. They have all been located in other countries.

It is a poor consolation to the British railway passenger to see photographs of the Chairman of the British Transport Commission getting personal experience of the rush-hour in the Tube, the pleasant hand-shaking at depôts, and the interminable engine-naming ceremonies, while you portray pictures of charming French buffet cars and, highest spot of all, the modern station office of the Swiss Federal Railways and the most excellent refreshment room shown in your issue of February 4.

On one occasion you raised our hopes with your description of the stainless steel coach of the Pressed Steel Company which was demonstrated on some of our main lines, and we visualised ourselves travelling in luxury quite soon, but, alas, it is understood that British Railways are not interested.

I am sure, sir, that you are just as anxious to be able to show some photographs of improvements which affect the ordinary passenger in Great Britain as we are to enjoy them. But when?

Yours faithfully,

A RAILWAY PASSENGER



## The Scrap Heap

### SHIPS ON RAILS

A New York correspondent of the *Daily Mail* reports that Mexican engineers are working on a project for a ship-carrying railway across the Isthmus of Tehuantepec between Puerto Mexico and Salina Cruz, some 150 miles. The cost is put at £75,000,000 compared with £3,500,000,000 for a ship canal. There would be twelve pairs of parallel tracks, over which 100-ft.-wide "wagons," powered by 30,000-h.p. motors, would transport ships up to 35,000 tons. The originator hopes to persuade the United States to back the project, which would afford an alternative in time of war to the vulnerable Panama Canal. It is of interest to recall that an early application in the American continent of the same idea was the Portage Railroad, on which canal boats were conveyed over the Alleghenies as long ago as the 1830s.

### 100 YEARS AGO

From THE RAILWAY TIMES, Feb. 17, 1849

#### RETURN TICKETS

Mr. Charles Russell, Chairman of the Great Western Railway Company, in the course of his speech at the half-yearly meeting on February 15, said:—"I cannot quit the subject of our accounts without adverting to a circumstance which I know has occasioned considerable dissatisfaction in the public mind. I mean the discontinuance of our system of return tickets. We resorted to that expedient with the greatest possible reluctance, but it was inevitable. I do not believe that either the public or the proprietors can be aware of the extent of the remission of charges which was involved in our system of return tickets. We have had an account carefully made of the operation of that system for the year ending June 30, 1848, and we find that during that period the number of first-class passengers who travelled by our express and our ordinary trains was about 230,000. Of that number as nearly as possible one-half availed themselves of the use of the return tickets. The number of our second class passengers, which constitute, of course, the great bulk of our traffic, was about 1,050,000, and of that number about two-thirds availed themselves of the use of return tickets. The system of return tickets practically, therefore, amounted to this: that we remitted one-third of our charge on our first-class passenger traffic, and on two-thirds of our second-class passenger traffic. Nor is this all. You can have no notion of the extent to which frauds were practised on us by the transfer and sale of the return tickets, and which we found we could not possibly prevent. I believe a more striking instance cannot be found than we have seen exhibited in the return-ticket system of that laxity of principle by which men justify it to themselves to do that in their dealings towards a public body which they would shrink from doing in their dealings with each other. Great complaints have been made against us for having discontinued the system, and we have been charged even with a breach of faith towards the public; but I know of no principle of law or justice, and until railways were established, I never heard of the practice, which enables one man to travel at the expense of another." (Loud cheers.)

#### IRISH TRAVEL

Heated many degrees above hothouse point, the Enterprise Express transports you from Dublin to Belfast in exactly two-and-a-quarter hours with a punctuality that makes anyone used to the oddities of lesser Irish trains blink in disbelief. At 5.30 p.m. it leaves Amiens Street, and at 6.50 p.m. the price of whisky rises from 1s. 5d. to 2s. 6d.; you are across the Border.—From *"The Spectator."*

#### GOAT DEVOURS RAILWAY DOCUMENTS

Major O. P. C. Collier, General Manager of the Eritrean Railways, sends us the following copy of a report on an "incident" which took place in July on that railway. He adds that the goat in question was tried after the "incident" with various pieces of paper in which he showed no interest, but, on being tempted with official documents, ate them with avidity. Major Collier concludes that there must be something particularly attractive about the ink used by the Government printer!

#### BRITISH MILITARY ADMINISTRATION, ERITREA

Eritrean Railways & Ropeway,  
Traffic Manager's Office,  
Asmara, July 15, 1948.  
Ref. TM/P/136/40

Subject:—Destruction of Documents at Mai Atal by Hungry Nanny Goat.

Further to conversation C.A./T.M., please find attached report made by T. & T.C. on the a/m incident.

S/d C. E. YOUNG,  
Traffic Manager.

CEY/cc.

#### TRANSLATION

To:—C.S./M. Massawa

Asmara, 13/7/48  
Ref. TC/6/226

Copies to:—Traffic Manager  
C.S./M. Mai Atal

The u/m documents having been destroyed by a goat at Mai Atal on the 12th inst., the vehicles concerned are to be forwarded on provisional documents.

C.S./M. Massawa will arrange with the C.S./M. Mai Atal for the issue of duplicates for each document, forwarding the original to this Office, and the 1st & 2nd copies to the Accounts Dept.

To the 2nd copies will be attached the Accounts Dept. copies of the first document issued.

- 1012—32/D 129 of 11/7/48 for 99-35 qls. common salt. Sender and Consignee Soc. Italicenne Saline Eritree
- 2036—32/D 131 of 11/7/48 for 95-45 qls. common salt. Sender and Consignee Soc. Italicenne Saline Eritree
- 60080—32/E 31 of 11/7/48 for 74-40 qls. of Stones. Sender and Consignee Ing. Tabacchi Massawa Asmara
- 42055—M.25 7274 of 10/7/48 qls. 105-50 coal. Sender Foreman L.D. Massawa, Consignee Foreman L.D. Nefasit.
- 41416—M.25 7300 of 10/7/48 for qls. 111-50 coal. Sender Foreman L.D. Ghinda Consignee Foreman L.D. Ghinda
- 41411—M.25 7275 of 8/7/48 for qls. 101-00 coal. Sender Foreman L.D. Massawa Consignee Foreman L.D. Ghinda
- 4204—M.25 7276 of 8/7/48 for qls. 92-00 coal. Sender Foreman L.D. Massawa Consignee Foreman L.D. Ghinda
- 42001—M.25 7277 of 10/7/48 for qls. 95-25 coal. Sender Foreman L.D. Massawa Consignee Foreman L.D. Ghinda
- 42099—M.25 7272 of 10/7/48 for qls. 89-80 coal. Sender Foreman L.D. Massawa Consignee L.R.S. Asmara

It must be well understood that no duplicate must be given to the Sender or the Consignee.

S/d Di SALVO  
T. & T.C.

#### TRANSLATORS' PITFALLS

An invitation to take advertising space in an "analytical press review" directed from Belgium contains some interesting examples of the missed target in the way of translator's English. For instance, it is announced that "any advertisement for your publications" in the specified review "increases their notoriety," which is not quite the way that an English angler in the same field would put it; moreover, "their notoriety may get immediate and efficient valorization for your benefit."

The valorisation of this notoriety follows because this "unique agent for prospectation . . . is sent graciously in Europe to all persons, firms, administrations, and organisms likely to subscribe to the publications mentioned in its pages." It may be assumed that "graciously" is a near-miss for "gratuitously" but even if it does get this "unique agent of prospectation" free of charge it will need a fairly high form of organism to make any effective use of the ensuing notoriety.—From *"The Manchester Guardian."*

## B & E R

To

## Cheddar

Luggage label of the Bristol & Exeter Railway issued at Yeovil Town Station last summer by the British Railways (Western Region) after nationalisation. The Bristol & Exeter Railway was amalgamated with the Great Western Railway in 1876, after an independent life of 27 years

#### TOAD IN THE TRAIN

A man who was fined £2 and £1 costs at Sheffield for stealing knives and forks from a railway restaurant car, said: "They charged me 6s. and gave me toad-in-the-hole."—From the *"Daily Express."*

#### Tailpiece

##### CROSS-TALK

("Talking" traffic lights are now being contemplated)

How gratifying, in time of need,  
When tottery dawns follow gaudy nights,  
To find one's progress guaranteed  
By walking according to one's lights.

How odd, though, if one heard one day,  
Whilst waiting to cross at eleven o'clock,  
A hoarse voiced robot blithely say:  
"Lumme, it's So-and-So-wotcher, Cock!"

And what would happen, I'd like to know,  
If the colours should get their lines all  
crossed;  
If green said "Stop!" and red said  
"Go!"

We mortals would be traffic-tossed.

Indeed, t'would be a prospect dear,  
If, in this game of "to and fro,"  
One failed to make it and woke to hear,  
Mixed with the harps, "I told yer so!"

A. B.

# OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

## SOUTH AFRICA

### Traffic Supervision and Control

The continued expansion of services and the need for more expeditious working have made necessary a further improvement of control and supervision. An important step in this direction was taken recently by the appointment of 29 operating inspectors and 26 commercial inspectors, the majority of whom already have assumed duty.

These new posts were created after a survey had shown that the old system of inspection, hitherto carried out by district inspectors, was not suited to present-day conditions. Since the creation of the grade of district inspector more than 40 years ago, the work and responsibility of these officers have increased so much that some alternative system became necessary to cope with the demands of an ever-expanding service.

The new officers, as their titles indicate, have clearly recognisable duties. The operating inspectors will ensure that the best use is made of wagons and engine power, there is proper co-ordination in all operating matters, and that traffic is moved expeditiously. The commercial inspectors will deal with the handling of traffic in goods sheds, and with claims and complaints from the public in this regard. They will supervise also the entering and handling of goods and will deal with commercial matters generally.

## PAKISTAN

### Flood Damage

The monsoon of 1948 (July to September) was a difficult period for the North Western Railway. Abnormally heavy rainfall caused serious floods which washed away many sections of the railway. The floods caused by a breach in the marginal bund of the river Indus near Sukkur, interrupted all communication with Quetta. The railwaymen fought the floods with such determination and skill that the damage to the railway lines was localised, and communication with Quetta was restored after only three weeks.

### Efficiency Campaign

The North Western Railway Administration chose the month of January, 1949, for a campaign called the drive for the "Three E's," economy, efficiency, and earnings. During this month, every railwayman tried to find ways and means of effecting economy, improving efficiency and increasing earnings.

## CANADA

### Record Earnings

Canadian railways had record earnings in October, 1948, with a total of \$82,839,900, 42 per cent. more than the previous monthly record of \$79,481,743 in September, and 18.6 per cent. above the earnings of \$69,820,158 in October, 1947. October, normally, is the most active month of the railway year. Freight revenues, increased by the 21 per cent. increase granted by the Board of Transport Commissioners, were \$12,516,659, or 22 per cent. higher than a year before, although car loadings increased only fractionally. Passenger revenue showed only a minor increase, but express revenues rose nearly 19 per cent. to \$480,084. On

the debit side, operating expenses rose during October to \$69,655,066 from \$58,675,819 a year earlier, a 19 per cent. increase. All expenditure accounts were heavier, with maintenance up by \$4,867,170 to \$28,807,100. Mainly because of higher wage payments, transport costs rose by \$5,883,113, or 20 per cent.

### Freight Haulage Record

Canadian railways carried the greatest amount of freight in their peacetime history in 1948. The total for 52 weeks ending December 25 was 4,069,952 cars as compared with 3,944,788 cars in 1947 and the pre-war period of 3,695,415 cars in 1928. For the single week ending December 25 it was 59,092 cars, compared with 52,803 for the week ending December 27 last year. Because of the Christmas holiday they showed a drop from the previous week's 73,293 cars.

### Diesel Power in Vancouver Island

Eight of the thirteen Baldwin-Westinghouse diesel locomotive units for the Esquimalt & Nanaimo Railway on Vancouver Island are in the Canadian Pacific shops at Vancouver, being serviced before delivery. It is expected that the entire order of 13 will be complete, and that replacement of the E. & N. steam power with diesels will be accomplished within the next two months. Eight diesel shunting engines are operating in yard service in the Canadian Pacific Vancouver freight yards. The diesels for Vancouver Island are destined for road service and one unit is already operating there.

### Great Wheat Movement to Eastern Ports

Aided by unusually mild winter weather, Canadian railways have moved so much grain to eastern ports that there is more on hand at Halifax and Saint John than there are ships to take it out. The wheat movement is stated to be already three times greater than at this period last year. The lack of snow in the west has enabled grain shippers to store large quantities of wheat at Fort William and Port Arthur elevators. From there it has been shipped without difficulty right to the side of waiting ships. The box car situation, which caused much trouble last winter, has improved greatly and is expected to improve further with the arrival of new equipment.

## UNITED STATES

### Railway Laboratory for Chicago

The Association of American Railroads is spending some \$600,000 on the building of a railway laboratory. The new buildings will occupy a site on the campus of the Illinois Institute of Technology in Chicago, and will house mechanical and electrical engineering laboratories, packaging and container studios, a humidity room for controlling test conditions, and offices for the research staff. Beside them will be a 600-ft. impact test track. It is expected that the work will be in hand this Spring.

### Beautiful Railway Bridges

The American Institute of Steel Construction recently awarded nine stainless steel plaques for what it considered the nine most beautiful steel bridges in their

respective classes built between 1942 and 1947. Of the nine, two were railway bridges. In Class 2 for 1944—bridges built in that year with fixed spans of under 400 ft., but costing more than \$500,000—the Pecos River bridge on the Southern Pacific system won the plaque. In Class 4 for 1945—bridges with movable spans of that year—the Harry S. Truman bridge over the Missouri river, built jointly by the Chicago, Rock Island & Pacific and the Chicago, Milwaukee, St. Paul & Pacific, was awarded the plaque. The Colorado River bridge at Topok, and the Canyon Diabolo bridge, both in Arizona and both on the Atchison, Topeka & Santa Fe line also received honourable mentions in Class 2 for 1945 and 1947 respectively.

### St. Louis-San Francisco Enters Mobile

The St. Louis-San Francisco has gained control of the Alabama, Tennessee & Northern a Class II railway running north some 200 miles from the important port of Mobile on the Gulf of Mexico, and crossing the Memphis-Pensacola line of the Frisco at Aliceville. The A.T. & N. has had a chequered career, as it serves no place of any size, apart from Mobile, but as part of the extensive system of the St. Louis-San Francisco, it should now share in the growth and prosperity of Mobile, where docks improvements costing four million dollars are in progress.

## BRAZIL

### Linking State Capitals

In addition to establishing through railway communication between the north and south, one of the main objects of the National Railways Plan organised by the National Railway Department is to establish through transport between the various State capitals and between them and the capital of the republic. So far, only six State capitals are linked up by rail with the capital, Rio de Janeiro, but on completion of plans in hand this number will be increased to seventeen.

At present through rail transport is available between Rio de Janeiro and the State capitals of Victoria (Espírito Santo), Belo Horizonte (Minas Geraes), Niterói (State of Rio), São Paulo (São Paulo), Curitiba (Paraná), and Porto Alegre (Rio Grande do Sul). Thus, fourteen State Capitals are without direct rail contact with the city of Rio de Janeiro, as also the Federal territories of Porto Velho, Rio Branco, Boa Vista, and Macapá. Some of these capitals, however, are interconnected, including the following:—Salvador and Aracaju; Natal, João Pessoa, Recife, Maceió; São Luiz and Teresina.

State capitals without rail connection either between themselves or with Rio de Janeiro are: Belém, Manaus, Porto Velho, Rio Branco, Boa Vista, Macapá, Fortaleza, Salvador, Florianópolis, Goiânia, and Cuiabá.

On completion of works already in the hands of the National Railway Department further interconnection between State capitals and the Federal Capital of Rio de Janeiro will be available as follows: Pará in the Northern region; all twelve State capitals of the east and north-east; those of São Paulo, Paraná, and Rio Grande do Sul in the south; that of Goiás in the west-central region. Only three State capitals and the Federal territories will then require to be linked to establish through rail transport between all points of the country.

Florianópolis, capital of the State of Santa Catarina, will be linked with the

major railway system of Brazil as soon as the extension from Blumenau to Itajaí is completed. Afterwards, Cuiabá, capital of the State of Matto Grosso, will be linked with Rio de Janeiro and other State capitals.

Manaus, in view of its geographical position on the River Amazon, and the Federal territories of Amapá and Rio Branco, will remain isolated from the rest of the railway system, but the Federal territories of Guaporé and Acre will be linked in due course by way of Cuiabá and the Madeira-Mamoré Railway.

In November, 1949, a through service will be inaugurated between Rio and Salvador, via Bello Horizonte, Montes Claros, Monte Azul, Brumados, and Contendas. The new line from Leopoldina Bulhoes to Goiânia on the Goiás Railway also will be opened for traffic. Two further constructions (new lines from Itapipoca to Sobral on the Rêde Cearense, and from Itaíba to Mundo Novo on the Rêde Bahiana) should also be completed. The former will establish through communication between the Baturité and Sobral Railways and form part of a through line from Fortaleza to Teresina, São Luiz, and Belém. The latter will establish a junction between the E.F. Central da Bahia and the E.F. do São Francisco.

A map of the railways of Brazil appeared in our January 7, 1944, issue.

## EIRE

### Government to Nationalise Transport

It was announced in Dublin on February 15 that the Government had decided on a scheme for nationalisation of transport. Legislation has been drafted and presented to the Dail which reassembled on February 16, for immediate acquisition of the public transport systems—railway, road and canal—other than those of the Great Northern Railway (Ireland) Company. A Transport Board is to be appointed, stockholders and shareholders are to be compensated, and provision is to be made to ensure that staff redundancy will be eliminated only over a period through

normal wastage due to retirements, deaths, and so on.

The statement on nationalisation says that the Government has the whole transport problem under consideration and "particularly in the light of the recent Report on Transport in Ireland submitted by Sir James Milne." Nationalisation was not recommended in that report; Sir James Milne clearly considered it best to retain the profit motive in the control of Coras Iompair Eireann. Objections already had been entered in strong terms from Labour quarters to this aspect of the report; it was pointed out that the effect would be that five directors representing authorised capital of £4,000,000 would have a majority on the Board, against three Government-nominated directors representing £20,000,000 of Government guaranteed debentures, although the nominees would have the right of veto on capital expenditure.

The most surprising feature of the preliminary Government statement on nationalisation is the omission of any reference to the Central Highways Authority which Sir James Milne had recommended should take over responsibility on behalf of the State for design, construction, and maintenance of the whole system of public "highways," taking this term to include railways, roads, and canals alike. Through this Authority, he intended that equalisation of track costs should be obtained, a "strategic" view of public transport taken, and the transport companies thereafter permitted to use the best tactics open to them as operators.

## GERMANY

### New Postal and Luggage Vans

The first two express postal vans to be built in Germany since the war were placed in service on the Frankfurt-Hagen main line recently. They were built to the order of the German postal administration by the Wagenfabrik Gebr. Credee, and are said to embody the latest improvements in postal van design. The overall length is 75 ft. 1 in., and the weight 20 tonnes. More vans of the same type

are to follow. It is learned that three wagon-building works in the bizone received recently a Reichsbahn order for two express luggage vans each, said to be of an experimental type. It is intended to place serial orders for these vehicles if service tests prove satisfactory.

### Better Through Connections

Although not all existing gaps in through connection will be eliminated the new timetable does away with many changes of trains and long hours of waiting at junctions. Connections between the Rhine and Ruhr areas and Hamburg and Bremen are to be improved by the introduction of two afternoon fast trains each way. Hamburg and Bremen will have improved connections with the south. An additional night fast train is to operate between the west and Munich. Finally, a large number of through coaches will provide cross connections, obviating change of trains on the most important through routes. Improvement is also envisaged of the international connections, now limited to 12 daily trains each way, although Germans are still not allowed to use them in the homeland.

## U.S.S.R.

### Diesel Traction Plans

Kharkov is now the centre of the Russian diesel locomotive industry, according to a recent statement by the Manager of the Kharkov Locomotive Works. The most powerful diesel locomotive for main lines now in hand is the TE-2 type, designed and developed by M. N. Shtchukin, member of the Supreme Soviet of the Soviet Union. This locomotive is stated to be able to cover 2,000 km. (1,242 miles) without needing to take water or fuel en route, which makes it particularly suitable for service in Central Asia where main lines, like the Tashkent line or the Turksib line which connects it with the Trans-Siberian line, cross extensive and arid steppes. Mention of diesel locomotives built by the Kharkov Works, and introduced on the Tashkent main line in October last, was made in a note published in our November 26, 1948, issue.

## Publications Received

**Nineteenth Century Railway Carriages:** In the British Isles—from the Eighteenth to the Nineteenth centuries. By Hamilton Ellis. London: Modern Transport Publishing Co. Ltd., Norman House, 105/109, Strand, W.C.2. 10 in. × 7½ in. 176 pp. Illustrated. Price 21s.—As Sir Cyril Hurcomb says in his foreword, "the story of the British railway carriage is a fascinating one, perhaps partly because, in various ways, it reflects our national temperament." Comparatively little has been written on this important subject, and the present volume, by an author who is already well known in the railway world, is particularly welcome. It originated with a series of articles in *Modern Transport*, and since revised and augmented, deals comprehensively with development of coach body design, from the experimental vehicles built for the Liverpool & Manchester Railway, in the 1830s, to the advent of the characteristic British side corridor train, with restaurant cars for all passengers, in the early years of the present century. The author has concentrated on broad trends and typical designs, but has not omitted some of the unconventional types. The book is pro-

fusely illustrated with reproductions of photographs and drawings. Of particular interest are the original G.W.R. eight-wheel broad-gauge coaches of 1852, known as "Long Charleys," early sleeping cars, and corridor coaches.

**The Stock Exchange Official Year-Book, 1949.** Volume I. London: Thomas Skinner & Co. (Publishers) Ltd., Gresham House, Old Broad Street, E.C.2. 10 in. × 6½ in. × 2½ in. 1,577 pp. Price (2 volumes complete) £6 (£6 2s. 6d. post free).—As previously announced, this year-book, which is now in its 75th year, is being published in two volumes at intervals of six months. The first of these, which has just been published, contains the special chapters, general information, and so forth, and all the sections of preceding editions with the exception of commercial, industrial, etc., financial trusts, land & property, investment trusts and mines sections, which are to be included in the second volume which is to be published in July. Full notices of the British Transport Commission and the British Electricity Authority are given in the public boards section and a preliminary notice of the Gas Council in the supplement. The 1949 edition of the "Register of Defunct

and Other Companies" will be published in July, 1949, simultaneously with the second volume of the Yearbook.

**Motor Control Switchboards.** Brookhirst Switchgear Limited, Northgate Works, Chester, has issued an illustrated leaflet describing switchgear installations for grouping the controls of motors employed on associated electrical drives. The switchboards facilitate the arrangement of the control apparatus in a neat and compact layout for groups of electrically-driven units for pumping, boiler house auxiliaries, conveyors, and the like. Starting equipments of any type and size complete with instruments, relays, and similar apparatus, as well as switchgear for auxiliary circuits, are built into the switchboards. The illustrations show the uniform front panel appearance achieved by this method of construction. Terminal boards for remote-control connections are provided for each switchboard pillar. Meters may be mounted either flush with the switchboard panels or fitted with pedestal mountings on top of the assembly. Switchboards of this type have been supplied for all types of a.c. motors for voltages up to 3,300, as well as for d.c. motors.



## Organisation of the British Transport Commission\*

*Paper presented to the Institute of Public Administration by  
Mr. Miles Beavor, Chief Secretary & Legal Adviser, B.T.C.*

IN the brief sketch I am endeavouring to give of the organisation of the B.T.C., I propose to keep as closely as possible to the facts of the case, as I hardly feel competent to discuss, or even comment adequately, on the theories of management or administration which may be involved. But no sketch can be intelligible without a few preliminary words on the provisions of Part I of the Transport Act under which the B.T.C. was created.

The Transport Act received the Royal Assent on August 8, 1947, and the B.T.C. came into existence very shortly after that date, under the provisions of Section 1, as a body consisting of a Chairman and not less than four, or more than eight, other Members, responsible for the future integration of British inland transport, and, as from January 1, 1948, the owners of all British railways, other than a very few minor lines, of the London Transport undertaking, and of the principal inland waterways of the country.

Its duties, responsibilities, and powers are defined in Sections 2, 3, and 4 of the Act, but it was not left to deal unaided with the gigantic task imposed on it by the Act; for by Section 5 it was laid down that five "satellite" bodies should be created, known as Executives, to work in the following spheres:—Railways, Road Transport, London Transport, Docks & Inland Waterways, and Hotels—and to act as agents for, and under the direction of, the Commission.

It is desirable to note three things about the Executives:—

(a) The members of each are appointed by the Minister of Transport and not the Commission—though the Commission has the right to be consulted.

(b) The Executives can exercise only such powers as are formally assigned to them by the B.T.C. under formal documents known as Schemes of Delegation.

(c) The number of Executives need not remain constant—it can be increased or reduced by the Minister, after consultation with the Commission.

Each Executive is a separate public authority with a legal status, and the machine which the Act has created may, therefore, be compared to a central sun with five planets attached to it, or, alternatively, to a small central Board of Directors with five corporate General Managers working for it in their separate spheres.

Such was the framework laid down by the Act, and it was left to the Commission to create the organisation under which it was to operate. The time allowed was brief; little more than four months, in fact, elapsed between the first meeting of the Members of the Commission and the date on which the huge railway undertakings of the country with over 600,000 employees passed into their control; and there were many important decisions to be taken in that period. No blue print was available, but speedy provision for the immediate needs of the moment was necessary, and so the actual organisation which has emerged, and which I am about to try to describe, can be regarded only as preliminary—it may perhaps be said to

be finding its feet—but it is barely 18 months old, and at that age, as every father has good reason to know, there may be marked elements of uncertainty about gait and development!

Intimate though my connection has been with the building up of that organisation, neither I myself, nor, I feel sure, the Members of the Commission would feel or claim that we have successfully solved all our problems, that we are to be regarded as an exemplary model of what the controlling organ of a vast undertaking should be, or that we have laid more than a foundation on which to build. We have to learn as we go along, but we have made some progress, and I am confident, from the results which I have seen achieved, that our progress is along the right road.

### Headquarters Organisation

(a) *The Commission:* I turn, now, to the organisation of the Commission Headquarters' Office, which is, as you see, set out on the chart. The Commission itself consists of a Chairman, Sir Cyril Hurecomb, three whole-time Members, Mr. Benstead, Lord Rusholme, and Sir William Wood, and one part-time Member, Captain Sir Ian Bolton, who has special knowledge of Scottish conditions and requirements.

Most of you will be aware of the loss which the Commission sustained last November in the death of Lord Ashfield, who was from the first a full-time Member of the Commission, and whose wide experience and great popularity with all ranks of the transport workers, not only in London but throughout the country, is so difficult to replace. I would wish to pay my tribute to a great man with whom, and for whom, it was a joy to work.

I must emphasise that there is no formal functional division of responsibility between the Members of the Commission. Essentially, their responsibility is collective, and all their decisions are taken collectively and at formal meetings held twice a week.

(b) *Chief Secretary's Department:* The Commission is served by three Chief Officers, the Chief Secretary & Legal Adviser, the Comptroller, and the Chief Public Relations & Publicity Officer. As Chief Secretary & Legal Adviser my main tasks are to see that the necessary facts are placed before the Commission to enable it to frame policy and to take decisions on the matters referred to its judgment either by the Executives or by the Ministry of Transport, or any other Authority, and when it has done so, to see that effect is given to its decisions. There are, of course, secondly, my more specialised duties as Legal Adviser, which relate at present mainly to the implementation of the Transport Act and the supervision of Parliamentary business.

As you will see from the chart, I have three principal Assistants: first, the Deputy Secretary, who is in a very real sense my deputy in all administrative work, and bears, also, particular responsibility for the minutes and records of the Commission, supervising directly the Secretarial Section which is shown on the chart below him. Second, is the Assistant Solicitor, who relieves me of the main brunt of legal study, and deals rapidly and efficiently with all legal problems of a general nature which arise in the work of the Head-

quarters Office. He also supervises the Parliamentary legal staff who are organised as a separate section, working in our sub-office at 4, Cowley Street, and in this capacity acts as Chairman of the Parliamentary Committee on which all Executives are represented and who have to study and advise on all Bills in Parliament which may affect the Commission's undertaking, and a great many Orders and Regulations as well.

Thirdly, comes the Charges Adviser, who is in charge of a specialist section of experts who also work from No. 4, Cowley Street. He has the particular duty of assisting with the preparation of Charges Schemes under Part V of the Transport Act—a special problem which I shall mention at a later stage.

Before leaving this first tier of my organisation, I must not forget to refer to my responsibility for the Railway Research Service, an organisation which has accumulated wide knowledge and experience of transport matters and economics all over the world, and is continuing its activities in an ever widening degree in the interest of all the forms of transport in which the B.T.C. is interested.

In the second tier of my organisation come the three administrative Sections shown under the Deputy Secretary in my chart. They are, respectively, in the charge of the Principal Staff Officer, the Principal Works & Development Officer, and the Principal Traffic Officer. The main work of these Sections is indicated by their titles. They have been deliberately formed on a "subjects" basis and deal equally with each of the Executives, and their work is of great importance in the task of co-ordination of the activities of the Executives. But the Officers in charge are not to be regarded as technical specialists; their duty is to consider each problem and suggestion from whatever source it may emanate in the light of its reaction on the undertaking as a whole, and it is only in that light that I or they may have to add anything to the recommendations which the Executives, who are the General Managers, have to place before the Commission for decision.

In technical matters the Commission relies on the advice of the Executives and their specialist officers, though consideration is being given to the formation of a special organisation to deal with the problems of technical and operational research which present themselves at so many points in every branch of transport, and which underlie their future development.

### Duties of Comptroller

I turn now to the organisation of the Departments of the other two Chief Officers of the Commission.

(c) *Comptroller's Department:* The Comptroller is the Adviser of the Commission on financial policy, and is responsible for the financial administration and methods of the whole undertaking, and it follows that his operations include a measure of the supervision and control over the financial administration of the Executives. No attempt has been made to centralise this control in matters of detail, and a high degree of responsibility has been devolved on the Chief Financial Officers, or their equivalents, in each Executive.

All work which can be departmentalised or localised is pressed away from Head Office so that the department of the Comptroller may function as a relatively small unit, concerned mainly with questions of financial policy and organisation generally, with the shape, size and location of the various units of financial administration, and the conceptions which should govern

\* "The Organisation of the British Transport Commission." Paper read by Mr. Miles Beavor, Chief Secretary & Legal Adviser, B.T.C., to the Institute of Public Administration on January 31, 1949.

them, and with the usual processes of budgetary control, consolidated accounts and statistics, cost investigation, and audit.

The necessary contact, consultation, and definition of objectives and procedures are established by various means. There may be formal direction to the Executives or limitation of their financial authority where the subject matter warrants such a course (for example, important capital development), but otherwise the process of control is worked out and adjusted through the issue of memoranda by the Comptroller, through correspondence and through personal contact between the appropriate Officers of the Comptroller's Department and the Finance Departments of the Executives. On matters of common interest there are regular meetings of committees at head office attended by the appropriate officers of the Executives. These committees are small and informal, however, and the committee structure has been kept to a minimum.

### Six Divisions

The Comptroller's Department is divided into six Divisions, each in charge of a Director. The Divisions cover Funds, Accounts, Audit, Costs & Statistics, Acquisitions, and General Matters.

The Director of Funds is responsible for the control of current working capital and effective use of all the Commission's cash resources, for the financial arrangements in connection with the issue and service of British Transport Stock, and for the investment of surplus resources. The long-range planning of the liquid position is an important part of his duties.

The Director of Accounts is responsible for the rules of account to be followed throughout the Commission's undertakings, for the designing of the Commission's annual accounts, and for the preparation of these accounts from the detailed figures flowing from the various Executives and Departments. He also reviews and reports on the regular financial returns which are prepared by the Executives and the annual accounting budgets which they prepare.

The Director of Audit arranges for the external audit of all accounts and the integration of audit programmes, for an internal audit of the financial administration at the higher levels, and for the adequacy of internal check throughout the undertaking.

The Director of Costs & Statistics has to investigate costs and costing processes wherever these arise, and is also responsible for reporting on the financial aspect of development proposals. He arranges for the production of statistics for the undertaking as a whole and its various parts; some of these statistics are published for each four-weekly period in the booklet *Transport Statistics*.

The Division of the Director of Acquisitions deals with the financial considerations involved in the acquisition of undertakings. This includes the negotiation of prices for undertakings which the Commission has agreed to purchase voluntarily and of the compensation payable for undertakings which must be acquired under the provisions of the Act. The latter will include many thousands of road haulage concerns operating long-distance transport, and the considerable amount of detailed investigation involved in this task is undertaken by a panel of some hundreds of professional accountants throughout the country.

Finally, the Director of General Division deals with certain financial aspects of Commission policy in relation to special matters, such as pensions or insurance,

which do not fall within the scope of other Divisions.

(d) *Chief Public Relations & Publicity Officer's Department:* The task of the Chief Public Relations & Publicity Officer is a very wide one, and, you will agree, of vital importance to an undertaking which must above all things deserve and maintain the goodwill of the British public if it is to succeed. The Commission at an early stage found it necessary to appoint a Chief Officer directly responsible to them, not only to deal with the public relations at their own headquarters level, but also, of course, to co-ordinate and supervise this work throughout the whole of the undertaking.

His responsibilities include, not only close contact with the needs and reaction of public bodies, trade associations, local authorities, and so forth, but also staff publicity—that is to say, the circulation of information to all members of the staff—through media such as staff magazines and special articles in trade union and technical journals, with a view to fostering co-operation and a sense of "pride in the job" in all sections.

The Chief Public Relations & Publicity Officer has three principal Assistants:—

First, the Public Relations Officer, who deals with the press and maintains a reference and library section. He is also responsible for dealing with all Parliamentary correspondence and other public representations (and perhaps complaints) which come direct to the Commission's office. He has built up an efficient registry and filing system, and by this means, and by the close co-operation of the Executives, he is also to provide material for prompt and factual replies to M.P.s. and other correspondents.

Secondly, the Publicity Officer is responsible for the Commission's publicity in all its forms, including printed publications. Under his general responsibility for design matters, his advice is available to all Executives who have proposals of this nature to place before the Commission for approval.

Thirdly, the Commercial Advertisement Officer, who has been recently appointed to control, under the supervision of his Chief, the letting of sites and space for commercial advertising throughout the undertaking, so that unified terms and practices may become applicable in each Executive's sphere, and that the standards and reputation of transport advertising may be improved, to the financial advantage of the Commission.

### Co-ordinating Committees

In supplementation of this headquarters organisation, the Commission has thought it desirable to create two Committees to unite and co-ordinate all such activities both at Commission and Executive level. These are the Public Relations Policy Committee, consisting of the Chairman of the Commission and of each Executive, the meetings of which are also attended by the Chief Public Relations & Publicity Officer and myself, and the Public Relations Co-ordinating Committee which covers day-to-day working at officer level, of which the Chief Public Relations & Publicity Officer is the Chairman and to which each Executive sends its individual representative. You will appreciate that a very careful "tie-up" has been found to be necessary to avoid overlapping, and competition for publicity and space, and that the services of the Commission's experts can be of great assistance to the Executives in such matters as film production and public exhibitions.

I hope that my description of the Head-

### BRITISH TRANSPORT COMMISSION

Chairman :

Sir Cyril Hurcomb

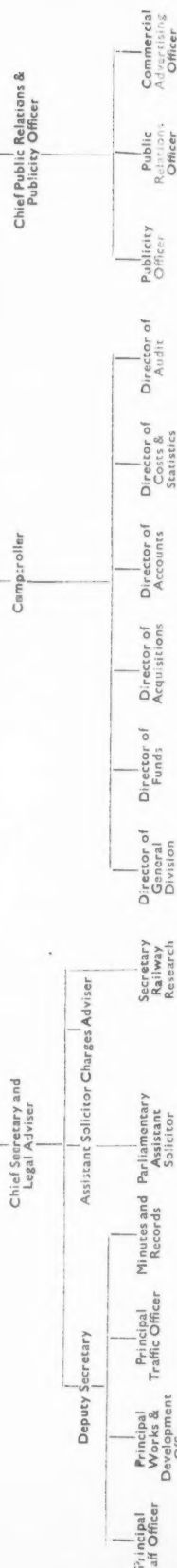
Captain Sir Ian Bolton

(Vacant)

Mr. J. Benstead

Sir William Wood

Lord Rushmore



quarters' Office of the Commission will have convinced you that the key-note of its design is directness and simplicity. It is by no means a large office, and the total number of our staff in all Departments today barely exceeds 150.

#### Organisation of the Executives

In the Executives, for the purpose of day-to-day management, much larger and more complicated structures may exist, and, though time will not permit me to describe each of these organisations in detail, I think that you will desire that I should attempt to give you some brief comments on the organisation set up by the Railway and Road Transport Executives to deal with the responsibilities which have fallen to their particular spheres.

(a) *Railway Executive*.—In the case of the Railway Executive there were two essential requirements that had to be met at the start: (1) the changes made on taking over the four great main-line railway companies had to be such that they would not jeopardise current daily working; (2) prompt advantage had to be taken of the opportunities afforded by unification for reviewing current methods of working and types of equipment and standardising the best—wherever standardisation was appropriate.

These two requirements were met (1) by accepting the areas covered by the former company networks as the general basis for the new Regions, except in Scotland, where it was felt to be both practicable and desirable to unite under a single Chief Regional Officer two systems that were formerly separate; and (2) by giving each of the six full-time Members of the Railway Executive (excluding the Chairman) certain functional responsibilities over the entire system, and providing that these functional Members could deal directly with their functional counterparts at each Regional headquarters on technical and departmental matters.

#### Alternative Arrangement

Both these latter provisions have been criticised on the grounds that they encourage specialisation at a level where the chief need is for wise administration in the widest sense and leave Chief Regional Officers in an anomalous and awkward position. In themselves, these points are reasonable enough. But consider what the alternative would have been—an Executive composed mainly of Regional General Managers, perhaps assisted by one or two specialists, and presided over by an independent Chairman. That is precisely how the wartime Railway Executive Committee was constituted; but its function was co-ordination, not unification, and one can hardly escape the conclusion that an Executive composed of Regional General Managers, each very properly convinced that his own Region was superior to any other, eager to get back to administering his own kingdom, and grudging the time spent away from that kingdom at frequent Executive meetings, would have found progress towards unification a slow and difficult matter.

As it is, such progress is not easy, but in this initial stage of unification it is much more likely to take place under an Executive whose members have functional responsibilities each covering the entire railway system, than under any assembly, however enlightened, of Regional or System General Managers. Moreover, the functional Members of the Railway Executive are not merely technical experts; each is an experienced administrator, accus-

tomed to controlling Departments with a staff numbering many thousands.

In practice, the position of Chief Regional Officer has not proved to be anything like as difficult as it looked on paper, largely because the individuals appointed to these positions were men of character and achievement, whose guidance was appreciated and welcomed by the heads of Regional Departments. Chief Regional Officers are kept fully advised of what is happening by receiving copies of any important letters that pass between the functional Members of the Executive and their Regional departmental officers, and are able to carry out their function of co-ordinating and making effective the policy of the Executive within their respective Regions. For some time now, Chief Regional Officers have been attending by invitation one meeting of the Railway Executive each fortnight, and the personal contacts and free exchanges of views which are thus made possible, have, I think, helped considerably in the smooth working of the railway organisation.

Within the Regions themselves certain changes have taken place, including the combination of freight and passenger commercial work under single Commercial Superintendents where this had not already been done (there is one Region where this change has not yet been carried out), and the assumption of responsibility for goods terminal work by the Commercial Department, to provide a closer liaison between terminal and cartage operations. There has also been some tidying up of Regional boundaries by the transfer of penetrating lines and absorption of joint lines; and in due course the consideration already given to the revision of District Officers' responsibilities in Scotland will be extended to other Regions which still maintain their separate district officers in cities served by two or more Regions.

The basic fact to remember in railway organisation is that this organisation has evolved during a century of experience, and that it is essential to proceed cautiously in adjusting the differing systems preferred by the various railway companies to achieve a single standard.

(b) *Road Transport Executive*.—I come next to the Road Transport Executive, where on the road haulage side a new national organisation has to be built up to weld together all those undertakings engaged in the long-distance carriage of goods and merchandise by road which under the provisions of Part III of the Transport Act have to be compulsorily acquired by, or on behalf of, the Commission, and which have to be welded into a homogeneous whole.

I am deliberately confining my remarks under this head to road haulage, because the procedure laid down under the Transport Act in connection with road passenger undertakings is quite different, and these can only be acquired compulsorily by means of area schemes to be prepared and promulgated under Part IV of the Act, and no blue print of the appropriate organisation can yet be referred to in public until a scheme of this character has been prepared and published.

Preliminary steps for this purpose are now being taken, and one of them has been the acquisition by the Commission by means of a large share purchase of the controlling interest in the bus companies in the Tilling Group, and it is well known that other negotiations of the same character are in progress.

On the road haulage side, however, the principle of the organisation which is being set up, as with the Railway Execu-

tive, is to decentralise everything that can be decentralised, subject always to the necessity of retaining the degree of unified policy essential to a publicly-owned undertaking which is under an obligation to treat all its customers on the same basis.

The Road Transport Executive itself consists of a Chairman, four full-time, and three part-time Members. The Chairman himself is also free from heavy functional responsibilities of a technical nature, but the remaining full-time Members are regarded as functional experts in the spheres of engineering, operations, organisation, and personnel matters. Each of the functional Members of the Executive is assisted by a part-time Member, and has appropriate Chief Officers acting under his instructions, but the Secretary of the Executive (who is also their Legal Adviser), the Chief Financial Officer, and the Public Relations Officer report to the Chairman and to the Executive as a whole.

#### Divisional Management

Under the Executive, road freight transport will be administered through eight Divisional Managers, all of whom have been appointed. They, in turn, will control District Managers, probably about six per Division, and District Managers will control Unit Managers, each Unit Manager operating a fleet which will average 100/120 vehicles. Chief Officers at Headquarters may all correspond on their own subjects with Divisional Managers, who will be assisted by officers dealing with traffic, engineering, accountancy, staff and welfare, stores, and matters concerning property.

This organisation is being built up now, and I can assure you that everyone concerned is fully conscious of the need for ensuring that, throughout the organisation, authority matches responsibility, and for encouraging initiative and decision at all levels, particularly the unit level, so that the operation of vehicles in an industry which has hitherto been so individualistic may not be hampered by rigid and remote control.

Time does not permit me to deal in any detail with the other three Executives. It must suffice to say that the Docks & Inland Waterways Executive and the Hotels Executive are building up their organisations on lines which are, on the whole, similar to that which I have outlined for the road haulage side of the Road Transport Executive, and that the London Transport Executive has automatically succeeded to the capable and efficient organisation which Lord Ashfield built up for the London Passenger Transport Board.

(c) *Relations between Commission and Executives*.—I turn, therefore, to the question of the relations between the Commission and the Executives and the manner in which the operations of the Executives are controlled and co-ordinated by the Commission with a view to the accomplishment of that integration of inland transport which is the objective and the justification of the Transport Act.

Within the scope of the powers delegated to them, each Executive has a large measure of independence and manages its own affairs, but the duty of the Commission to formulate policy cannot be effected without the closest contact and co-operation with the Executives, who must, and do, from day to day, keep the Commission fully informed as to their problems and developments.

The Commission in formal Directions to each Executive has laid down the limits under which each Executive may operate independently of the Commission, as, for



instance, that the London Transport Executive may spend up to £50,000 on a new works project without the necessity of a formal submission for the Commission's approval. But on all important matters it is the practice for each Executive (and on occasions for more than one Executive) to submit formal reports to the Commission in much the same way as the General Manager of one of the main-line railway companies in the past submitted his reports to the monthly meetings of his directors.

These reports normally follow the official channel of Executive Secretary to Commission Secretary, and it is the duty of my organisation at the Commission's headquarters to consider these reports and to submit them, with the appropriate comments, if they appear to raise questions on which wider interests than those of a single Executive are involved, or matters which may affect principles which have been laid down or decisions which have already been taken in other directions.

It follows that many cases arise where direct discussions between the Members of the Commission and the Members of the Executive are both necessary and desirable, and, accordingly, meetings between the Commission and the Members of the Executives frequently take place, those with the Railway Executive being arranged at not less than regular monthly intervals.

#### Staff Problems

It will be readily understood that the closest contact is necessary on all questions relating to the staffs of the Executives, and the many problems of wages and other conditions of service which must arise in so vast an undertaking, and machinery has already been set up for regular meetings of the staff officers of the various Executives, which are attended by the Principal Staff Officer of the Commission who deals with Staff & Establishment matters.

Similarly, on the financial side, it is the responsibility of the Comptroller and his Directors to build common practices of financial operation and control in an undertaking whose revenue and expenditure exceed that of the smaller members of the United Nations. A direct functional link or liaison is being created between the Comptroller and each Executive and their Regional or Divisional Accountants, though in this respect every effort is made to decentralise and to dispose of financial problems at the appropriate level.

The flow of business from the Executives to the office of the Commission, therefore, is of very considerable volume, and the Commission sets apart Tuesday and Thursday mornings of each week for formal meetings at which it records its decision on matters of current business which are submitted to it, and on which consideration is also given to the separate minutes of each Executive which are forwarded regularly to the Commission by way of record of the business which the Executives are transacting.

There are, however, three particular directions in which the general procedure which I have tried to sketch has had to be developed and adapted to deal with particular problems. These are:—

- (1) Charges policy;
- (2) Common services;
- (3) Staff consultations.

In regard to charges, it will be readily understood that a common policy is required to achieve the integration of rail and road services throughout the country, and here the burden of leadership clearly

rests with the Commission itself. The Transport Act has given to the Commission a very considerable measure of freedom on this subject. Under Part V the Commission has been given the duty to formulate charges schemes which, when approved by the Transport Tribunal (a body which is in effect the Railway Rates Tribunal constituted by the Railways Act, 1921, under a new name, and with a wider scope) and, when formulated, these schemes will supersede all existing charging powers. This task is one of such obvious importance that the Commission has not included it in any of the Schemes of Delegation issued to the Executives, but have retained it in its own hands.

#### Charges Committee

A special body known as the Charges Committee has been set up by the Commission under the Chairmanship of Sir William Wood, on which the principal Executives are represented, and which, in turn, is served by appropriate Sub-Committees of experienced officers for the goods and passenger side of each form of transport. This special organisation has already made good progress with the preliminary work, such as the formulation of a new goods classification, on which the charges schemes will be based, but I should emphasise that this is a special piece of machinery which exists quite apart from the normal administrative machinery of the undertaking.

The question of common services, however, is a rather different problem which affects those subsidiary services not directly concerned with the management and operation of transport, but which must necessarily be provided for every large commercial undertaking. Two of the most typical are, perhaps, the Legal Service and the Public Relations Service.

As regards the Legal Service, it is clear from the experience of the railways in the past that there is ample justification, both from the point of view of finance and of general convenience, for a full-time service of experienced solicitors, and the aim is to widen the scope of the existing railway organisation to cover the whole organisation of the Commission, so that the greater part of the routine legal work which has to be performed throughout the undertaking, as, for example, the acquisition and letting of land, the settlement of legal disputes on claims arising from loss or injury, and the prosecution of pilferers or other offenders, the same organisation can serve every Executive, notwithstanding the fact that each Executive has a separate legal existence of its own.

Similarly, in the sphere of public relations, confusion and waste could only too readily result if each Executive worked on independent lines, not only at its own headquarters, but throughout the country. Here, community of thought and outlook, co-ordinated through the Chief Public Relations Officer of the Commission, is to be a feature of the organisation which is now being developed.

The third problem—that of staff consultation—is perhaps the most difficult and vital of the three. It is, indeed, one of the main tasks of the Commission to foster throughout its entire undertaking an outlook not exclusively railway, or road, or inland waterway, but one which will be wide enough to see transport as a whole. Every man in transport today, and the present number of about 800,000 may soon grow to nearly a million, has been brought up and trained in one or other of the particular branches, and has a natural

loyalty to his own branch. This loyalty must be enlarged beyond the interest of a particular Executive into a greater loyalty to the undertaking as a whole.

The Commission, therefore, has to explain its problems and its policy to its staff at all levels; and equally it has to discover and solve the problems and difficulties which beset the staff in their daily work. A bridge has to be built between the ultimate authority and the man on the job, and it is with this end in view that the Commission recently has created a British Transport Joint Consultative Council at which Members of the Commission and of the Executives will meet the principal officers of the larger trades unions, and representatives of the staff, and at which all current problems of the undertaking, other than those concerned with conditions of service, will be discussed, and at which the full and freest exchange of views will be possible.

Staff problems must naturally follow the machinery of negotiation, which is already on the railway side the subject of long-standing agreements, and which will be similarly developed on the road side under the provisions of Part VIII of the Act. At the officer level it is hoped that contact and co-operation will be achieved by the holding of regular conferences as a permanent and, I hope, valuable feature of the organisation of the Commission.

I have tried to describe the organisation of the British Transport Commission and to say something of its objectives and its problems. Our organisation is very young and we have much to learn. I am, indeed, anxious to profit by the period of cross-examination for which I am now about to offer myself. But in all our activities I can assure you that the Members of the Commission are continuously reviewing our methods and our results, and are more than prepared to make changes wherever the need for change is established.

I know that there is sufficient flexibility to foster the right kind of growth, and I am confident that the wise direction which the Commission gives to all the talent available at all levels in its vast undertaking in due course will achieve that tremendous objective which Parliament has given us—a national transport service which is adequate, efficient, economical, and properly integrated.

---

**REDUCED FARES FOR FISHERMEN.**—Reduced fares for anglers are now available on the Southern Region of British Railways. Cheap tickets at the single fare for the return journey will be issued to members of angling clubs and associations on production of a membership card and rod and line. These tickets will be issued at any station on any day by any train to more than a hundred river and seaside fishing haunts.

**NEW TYPE OF BOOKING OFFICE WINDOW.**—Booking office windows designed to safeguard the health of clerks by preventing the passage of infected breath are being tried out at the following stations on British Railways Eastern Region: Bowes Park, Liverpool Street, Marylebone, Grimsby Docks; London Midland Region: Watford; North Eastern Region: Harrogate; Western Region: Ealing Broadway; Scottish Region: Glasgow Queen Street. The experiment will be watched by Regional Medical Officers in collaboration with the Medical Research Council and bacteriological tests will be made of the air intake through the present and the new type of window.

## Rebalancing Three-Cylinder Locomotives

*Eliminating the hammer-blow of a number of 2-8-0 goods engines by reducing the reciprocating balance to nil*

*By Thompson Fairless, A.M.I.Mech.E.*

**L**OCOMOTIVE axle-load and hammer-blow values are outstanding factors in the construction and maintenance of railway bridges and track, the importance of which has claimed much attention in recent years, and engineers agree that any relief made to either of these factors would bring about beneficial results.

It has been shown fairly conclusively that the bridge and track engineer can on a ton-for-a-ton basis, permit higher axle-loads, relative to reductions made in hammer blow. It also might be said that an engine with 15½-ton axle-load and no hammer-blow, generally is less harmful to the track and bridges than an engine with

13½-ton axle-load and a 2-ton hammer-blow.

A question of axle loads and hammer-blow arose on the railway with which the writer is concerned, when operational restrictions were placed on the usage of a three-cylinder type of goods engine on certain sections of the track, so that the track life could be prolonged and maintenance costs reduced. This restriction impeded to some considerable extent, the efficiency of traffic working, and it soon became evident that some modification must be made to this class of engine to enable them to resume free circulation over the system.

One proposal was to rebuild these 2-8-0

locomotives by the introduction of a four-wheel bogie to replace the pony, and thus relieve the loadings on the coupled axles. Apart from the loss of adhesive weight, it was seen that considerable expenditure would be involved in the provision of new frames, bogies, and so on. Furthermore, such reconstruction necessarily would put the engines out of service for some time, as well as interfere extensively with the normal engine repair programme.

In view of the recent advances made in the balancing of three-cylinder engines, a counter proposal was made to study the possibility of eliminating the hammer-blow of these engines by reducing the reciprocating balance to nil, and agreement was reached that if this was done, the engines would be in a condition to operate over the entire system; it also being appreciated that the work could be carried out at a relatively insignificant cost.

Concerning the original balancing of these engines, it is of interest to note that

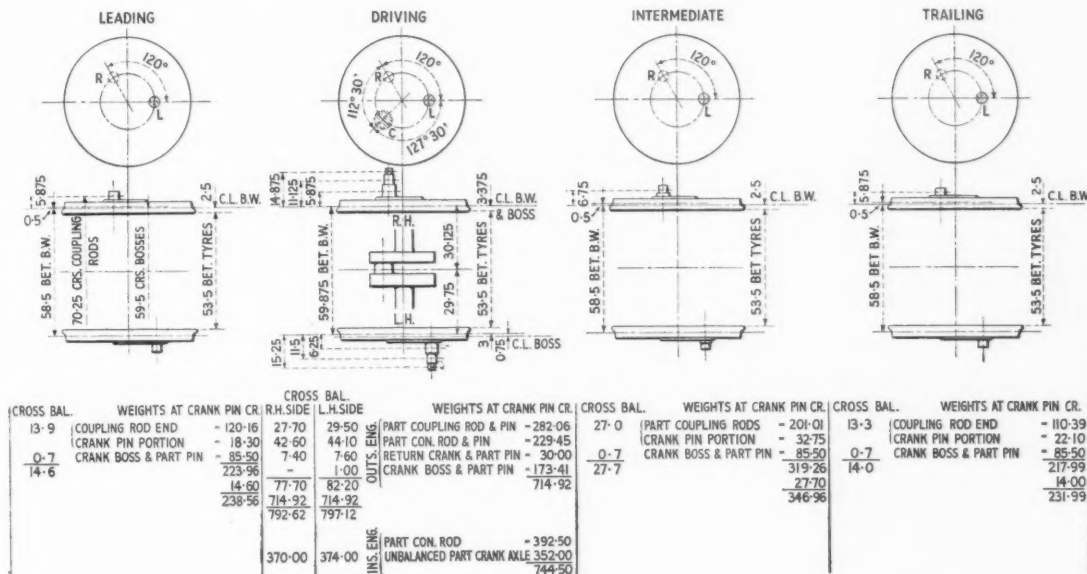


Fig. 1—Calculations for balancing the revolving parts

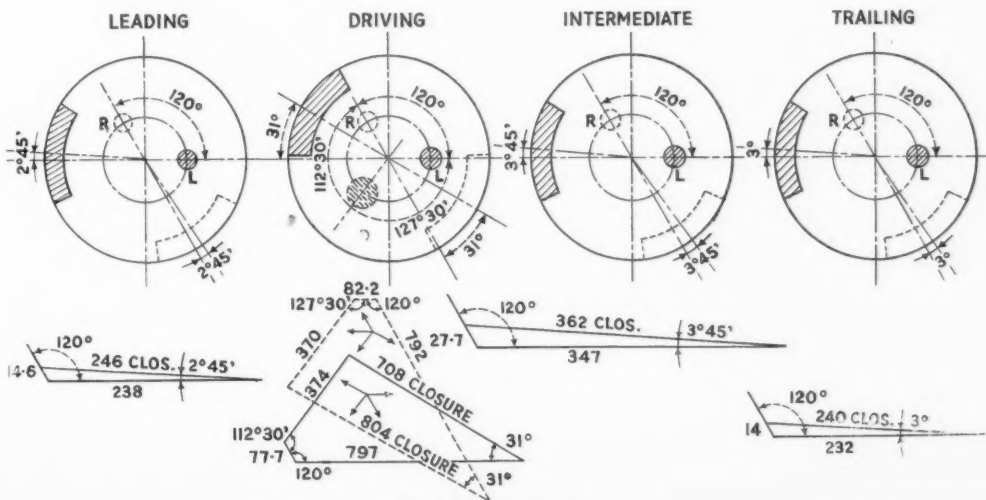


Fig. 2—Force polygons

the first batch to be built had a considerable amount of reciprocating balance concentrated in the driving wheels, resulting in an appreciable hammer-blow of 5 tons at 5 r.p.s. and that the second batch, built a few years later, and after the publication of the British Bridge Stress Commit-

journals, connecting and coupling-rod bushes, and so on. Reports were to be found stating that no abnormal wear was recorded on three-cylinder engines which have had the reciprocating balance removed, and it was concluded that this was due to the inertia of the engine damping

qualities of these engines, and from a practical point of view, locomotive inspectors and technical staff have commented on improved riding qualities, as well as the lesser tendency to slip when starting heavy loads. These impressions may have been brought about, firstly by the cancellation

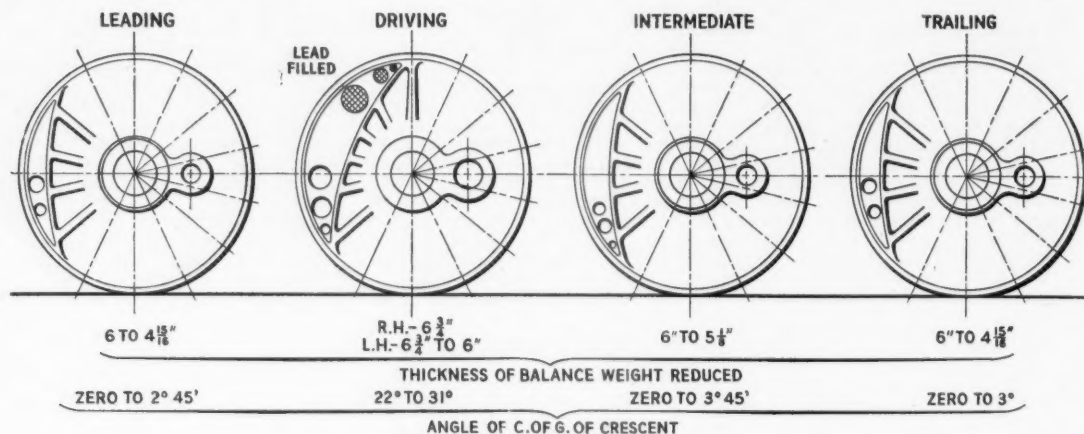


Fig. 3—Modification made to the coupled wheels

tee's report of 1928, had a better distribution of the reciprocating balance among the driving and coupled wheels, the hammer-blow being reduced to 3½ tons at 5 r.p.s.

Apart from the balancing, the constructional features of both batches were identical, all three cylinders driving the second

out any appreciable increase in longitudinal and nosing oscillations.

The elimination of the reciprocating balance of these two batches of engines resolved itself into the modifications to be made to the balance weights, so that the revolving weights only would be balanced.

of cyclical variations of rail load beneath the coupled wheels, and secondly due to the corrections made to the balancing of the revolving parts.

The data shown on Figs. 1, 2 and 3 and on the summary of balance weights given above refer to the batch of engines where the distribution of the reciprocating

#### SUMMARY OF BALANCE WEIGHTS AND ANGLES

	Leading R. and L. Hand		Driving R. Hand		Driving L. Hand		Intermediate R. and L.		Trailing R. and L.	
	As made	As modified	As made	As modified	As made	As modified	As made	As modified	As made	As modified
Balance weight at crank rad. (lb.)	375	246	855	804	855	708	484	362	375	240
Crescent in lb. ....	227	150	600	547	600	482	303	225	227	146
Distance of C. of G. ....	21.5 in.	21.5 in.	18.5 in.	19.1 in.	18.5 in.	19.1 in.	20.75 in.	20.9 in.	21.5 in.	21.3 in.
Moment of crescent ....	4,880	3,198	11,100	10,452	11,100	9,204	6,287	4,706	4,880	3,120
Angle in deg. ....	Placed oppos. crank	2 deg. 45 min.	22 deg.	31 deg.	22 deg.	31 deg.	Placed oppos. crank	3 deg. 45 min.	Placed oppos. crank	3 deg.

pair of coupled wheels, the inside cylinder having an upward inclination of 7½ deg., resulting in an unequal crank arrangement of 120, 112½ and 127½ deg.

Consideration was given to the mass weight and length of wheel base, namely, 69 tons and 26 ft. 3 in. respectively, in making the assumption that the removal of the reciprocating balance would not produce longitudinal and nosing oscillations which would not be cancelled out to a large extent by the inertia of the engine, factors which increase or diminish together, relative to speed. Also, it was borne in mind that a decided improvement in the balancing of the revolving weights could be made by taking into consideration the unequal spacing of the cranks, a feature of engine balance which had been neglected in both batches of locomotives as built, to enable the driving wheels to be cast to the same pattern.

A further consideration was that any reduction made to the mass of the balance weight would lessen the lateral blow of the wheel against the rail, this being especially beneficial to the component parts of bridges. Guidance also was sought on the question of wear of engine parts, such as axleboxes, axlebox guides, and play on

It should be mentioned, that in the initial stages of carrying out this modification, a few engines had only half of the reciprocating balance removed, after which locomotive inspectors reported that they found no difference in the haulage, or riding qualities of the engines.

In making the calculations for the balancing of the revolving parts, as shown in Fig. 1, every care was taken; each part involved was weighed and centres of gravity found by test, as it was desirable to reduce to a minimum any under or over balance which would in effect produce a hammer-blow, bearing in mind that no means would be available by which discrepancies could be checked after the modification had been carried out. Fig. 2 shows the force polygons and Fig. 3 the modifications made to the balance weights to correct them for weight and to move the angles of the centres of gravity to their new positions. The summary of balance weights and angles table shows the as made and as modified particulars.

The results found during the running of some 350,000 km. on the engines already modified, is that the removal of the whole of the reciprocating balance, has not produced any adverse variation in the haulage

balance as made was as follows:—Inside engine 60 per cent. of one set of parts in the driving wheels; each outside engine 60 per cent. of one set of parts equally distributed amongst the coupled wheels.

Modifications also have been made to the crank axles to enable all the wheels and axles to be interchangeable throughout the whole class.

**BRITISH TOURIST CENTRE: NEW YORK.**—New offices of the Tourist Division of the British Tourist & Holidays Board at 336, Madison Avenue, New York, were opened by Sir Oliver Franks, British Ambassador to the United States, on January 6. Sir Oliver Franks was supported by Sir Alexander Maxwell, Chairman of the Tourist Board, and leading representatives of the American travel trade also were present. The new centre is situated within a few yards of the Grand Central railway terminal and occupies the ground floor of an impressive building. It is attractively decorated with photomurals illustrating many aspects of the British scene and there is a comfortable lounge where intending visitors to Great Britain can discuss their plans.



prac-  
ectors  
d on  
s the  
heavy  
been  
ation

death  
e to  
g of  
and  
iven  
here  
ting

fied

side  
arts  
ine  
ally  
to  
eels  
gh-

RK.  
of  
at  
ere  
m-  
ary  
Sir  
the  
ves  
ere  
nin  
ay  
of  
ely  
ng  
nd  
in-

## Station Scenes on the Swiss Federal Railways



*Because of its central position Switzerland is traversed by several important international expresses, such as the "Simplon-Orient" and "Arlberg"*



*A scene at a busy terminus, showing a few of the two hundred million passengers carried annually by the Swiss Federal Railways*

Photos]

["The Swiss Federal Railways Today"]

## "Sir Eustace Missenden"



On Tuesday last a new "Battle of Britain" Class locomotive was named "Sir Eustace Missenden." A report of the proceedings is on page 193. The illustrations herewith show the nameplate and coat of arms of the Southern Railway on the locomotive, and Sir Eustace Missenden, Chairman of the Railway Executive, after the nameplate had been unveiled. Below in a group taken at the ceremony are, left to right: Messrs. T. E. Chrimes, H. L. Smedley, W. J. England, H. E. O. Wheeler, R. C. Davidson, O. W. Cromwell, R. M. T. Richards, Sir Eustace Missenden, Messrs. O. V. Bulleid, John Elliot, S. W. Smart, R. P. Biddle, C. Grasemann



## RAILWAY NEWS SECTION

## PERSONAL

Sir Ben Lockspeiser has been appointed Secretary to the Committee of the Privy Council for Scientific & Industrial Research, in succession to Sir Edward Appleton, who will relinquish the post on April 30, and whose appointment as Principal & Vice-Chancellor of Edinburgh University was announced recently.

Mr. Mervyn F. Ryan, formerly Managing Director of the Buenos Ayres & Pacific Railway, left recently for New Delhi, where he will be Adviser for Railway Affairs to a mission sent to India by the World Bank in Washington.

The Uruguayan Government has appointed Señor Agustin Maggi to be Acting Administrator of the ex-British-owned railways.

The late Lord Palmer, who was a Director of Huntley & Palmers Limited, Deputy-Chairman of the Great Western Railway Company from 1906 to 1943, and the first person to be created a peer for services to music, left £1,014,558.

Mr. E. W. Steele, Director & General Manager of Works of the Metropolitan-Vickers Electrical Co. Ltd., has been appointed a Director of the Metropolitan-Vickers Electrical Export Co. Ltd.

Mr. F. A. Mason, at present Chief Engineer of City of Oxford Motor Services Limited, has been appointed Chief Engineer of the Western Welsh Omnibus Co. Ltd.

Subsequent to the power taken at a recent extraordinary general meeting, four Local Directors of Thos. W. Ward Limited have been made Directors:—Mr. Phillip T. Ward; Mr. George Stuart Wood; Mr. J. S. Bradshaw; and Mr. E. G. Mort.

We regret to record the death, at the age of 72, of Mr. Bernard W. Methley, who was on the staff of Steel, Peech & Tozer for 46 years, and when he retired from the position of Chief Chemist in 1947 became a consultant to the Research & Development Department of the parent firm, United Steel Co. Ltd.

The Road Transport Executive has announced the following appointments: Mr. T. H. Thornton to be District Manager, Southampton, South Western Division (Freight); Mr. J. B. Baxter to be Divisional Surveyor, Scottish Division (Freight); Mr. D. F. C. Hill to be Divisional Engineer, South Western Division (Freight); Mr. H. A. Wells to be Divisional Surveyor, Eastern Division (Freight).

Mr. E. W. Wimble, President of the International Union of Official Tourist Organisations, recently gave a luncheon at the Stafford Hotel, S.W.1, to mark the appointment of Mr. F. M. Morin (France) as Secretary-General of the Union.

We regret to record the death on February 14, in his eighty-seventh year, of Sir Ralph Cope, Chief Accountant of the Great Western Railway from 1916 to 1938. He joined the service of the G.W.R. in the Chief Accountant's Office, in the year 1877 and, after a wide experience in various sections of the office, was appointed Chief Clerk in 1910. Two years later his work in re-organising the accounts of the Hotels Department was

He received a knighthood in the New Year's Honours List in 1936, when the occasion of the centenary of the G.W.R. in the previous year was recognised by the honouring of leading officers of the company. Sir Ralph retired in 1938, after a period of service with the company extending over 61 years—a record for a high railway official. After retirement and until 1945, well after his eightieth birthday, he continued as a director of a number of the omnibus companies associated with the G.W.R. His interest in transport finance remained keen and he was present at the last general meeting of his old company in March of last year. A funeral service is being held today (February 18) at St. Gabriel's Church, Cricklewood, at noon, to be followed by cremation at the Golders Green Crematorium. A memorial service will be held at St. James's Church, Paddington, at 11.30 a.m. on Friday, February 25.

Sir Cyril Hurcomb, Chairman of the British Transport Commission, presided on February 10, at a dinner given by the Commission at the Great Western Royal Hotel, in honour of M. Christian Pineau, French Minister of Public Works, Transport, & Touring.

Mr. C. G. Tangye, Assistant Managing Director of Tangeys Limited, is undertaking a business trip throughout Southern Africa.

We regret to record the death on February 7 of Mr. Ernest Lyall, who since 1937 had been Manager of Armstrong Whitworth & Co. (Pneumatic Tools) Ltd., Close Works, Gateshead.

Mr. O. W. Humphreys has been appointed Manager of the Research Laboratories at Wembley of the General Electric Co. Ltd.

Mr. C. W. Pass has been appointed Manager for Crompton Parkinson Limited in South America. He was previously in charge of the Overseas Division of the company in London.

## OIL CONSUMERS COUNCIL

The names of the Chairman and members of the Oil Consumers Council have been announced by the Ministry of Fuel & Power as follow:—

Sir William Palmer (Chairman), Mr. J. C. Baker, Mr. J. G. Baty, Mrs. M. R. Beale, Mr. R. S. Biram, Mr. F. M. Birks, Mr. S. M. Caffyn, Mr. L. G. Carozzi, Mr. G. A. Coombe, Sir William Cushion, Mr. A. Deakin, Mr. E. A. Evans, Mr. F. George, Mr. W. V. Gibson, Mr. A. F. Hopkinson, Mr. R. L. Howlett, Mr. W. A. Hunt, Colonel A. Jerrett, Mr. S. L. Kassell, Mr. R. G. Kent, Sir Lynden Macassey, Mr. W. J. Manclark, Mr. C. M. Merrick, Mr. W. Vane Morland, Captain A. W. Phillips, Mr. M. Platt, Mr. E. J. Pode, Mr. N. Rowbotham, Mr. G. F. Sinclair, Mr. L. Sinclair, Mr. R. H. G. Sutton, Major H. R. Watling, and Mr. A. G. Wright, with, as Secretary, Mr. F. E. W. Barnett, Ministry of Fuel & Power.



Photo

[Lafayette

The late Sir Ralph Cope

Chief Accountant, Great Western Railway, 1916-38

specially recognised by the board of directors. In April, 1916, he became Principal Assistant to the Chief Accountant and three months later succeeded Mr. G. J. Whitelaw as Chief Accountant. During his twenty-two years in that position, Sir Ralph Cope's responsibilities were heavy and varied. He was concerned in the financial arrangements with the Government during and after control of railways in the first world war; the absorption of the constituent companies in the enlarged G.W.R., as a result of the Railways Act, 1921; negotiation of wages adjustments; financial evidence before the Railway Rates Tribunal in the standard revenue proceedings and subsequent annual review of railway charges; the development of agreements for the pooling of competitive traffic between the main-line companies. Sir Ralph Cope was appointed Chairman of the Railway Accountants' Committee in 1923 and of the Accounts Advisory Committee (London Passenger Transport Pool) on its formation in 1934.





**Mr. J. Brewster**

District Goods & Passenger Manager, Edinburgh, L.M.S.R., and Scottish Region, British Railways. 1946-49



**Mr. A. S. Railston**

Appointed Assistant Commercial Superintendent (Mineral), Eastern Region, British Railways



**Mr. W. J. Sadler**

Appointed Signalling Assistant, Signal & Telecommunications Engineer's Department, L.M. Region, British Railways

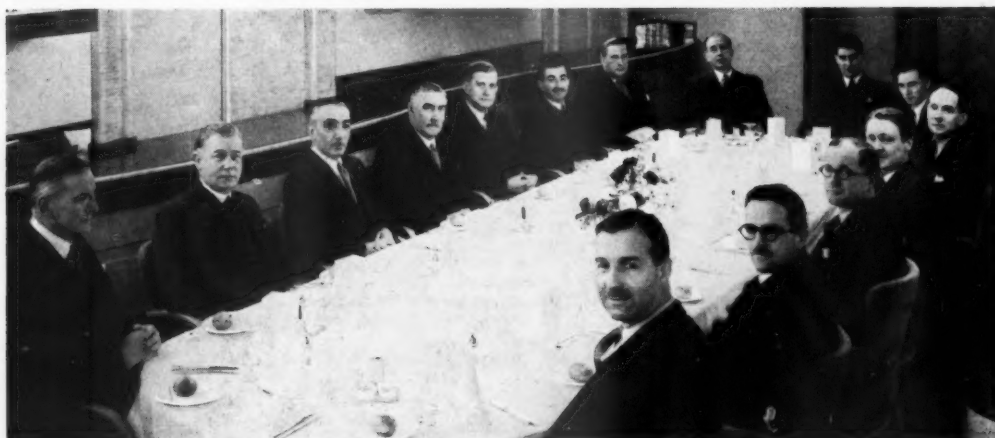
Mr. J. Brewster, District Goods & Passenger Manager, Edinburgh (former L.M.S.R.), Scottish Region, British Railways, who is retiring, began his railway career in the Goods Department of the Caledonian Railway in 1898. After a number of years service in that department at Stirling, Bridge of Allan, Doune and Auchterarder, he was transferred in 1905 to the Chief Goods Manager's Office, Glasgow, and had experience in the General, Transit, Rates, and Staff & Statistical Departments. He was appointed Chief Goods Clerk, District Goods & Passenger Manager's Office, Edinburgh, L.M.S.R., in 1928, and became Chief Clerk for the whole of that office in 1935. Mr. Brewster was appointed District Goods & Passenger Manager, Edinburgh, in 1946.

Mr. A. S. Railston, District Goods Manager, Manchester, Eastern Region, British Railways, who, as recorded in our February 4 issue, has been appointed Assistant Commercial Superintendent (Mineral) for that Region, began his railway career as a junior clerk with the North Eastern Railway at Birtley Station, County Durham, in 1911. Early in that year he was transferred to the District Goods Manager's Office, Newcastle, where he remained until he entered the Royal Navy during the 1914-18 war. He returned to railway service in 1919, and in 1921 he was successful in the first competitive examination conducted by the N.E.R. for the selection of traffic apprentices. Mr. Railston was made Assistant to the Mineral Manager at Doncaster in 1940, and became Assistant Mineral Manager in

1943. He was appointed District Goods Manager, Manchester, in 1947.

Mr. W. J. Sadler, M.I.R.S.E., who, as recorded in our December 24 issue, has been appointed Signalling Assistant, Signal & Telecommunications Engineer's Department, Euston, London Midland Region, British Railways, was educated at Nottingham High School and Derby Technical College. He entered the Midland Railway Signal Department as a privileged apprentice in 1914, obtaining experience in Derby Works and on outdoor signal construction and maintenance services. He entered the Army in 1916, received a commission and served overseas on military railway works. Returning to the Midland Railway in 1919, he entered the Signal Department drawing office at

### Luncheon to M. Ezatollah Hedayat, Iranian State Railways



Mr. A. J. Boyd, Managing Director, Metropolitan-Cammell Carriage & Wagon Co. Ltd., presided at a luncheon given by British manufacturers of railway equipment, at the Savoy Hotel on February 10, in honour of M. Ezatollah Hedayat, Director-General, Iranian State Railways (see article on opposite page)

*Photo*

*[Rawood]*

Derby. On the formation of the L.M.S.R. Signal & Telegraph Engineer's Department in 1929, Mr. Sadler was transferred to the new headquarters, where he was, successively, Statistical, Technical and Signal Sighting Assistant and became a lecturer on signalling under the company's scheme for the education and training of staff. In 1944 he was appointed Divisional Assistant (Signals), Derby, and, in 1947, Assistant Divisional Signal & Telegraph Engineer, Crewe. He has contributed to the Proceedings of the Institution of Railway Signal Engineers.

Mr. Gordon Weston has been appointed Assistant Director of the British Standards Institution.

Mr. Harold Eley, General Advertising Manager, Dunlop Rubber Co. Ltd., is retiring next month, after 36 years' service with that company.

We regret to record the death on February 10, at the age of 73, of Mr. Wallace Williams Heard, Secretary of the Brecon & Merthyr Railway Company from 1916 until that railway's absorption by the G.W.R. in 1922. He was trained in the Railway Clearing House and after joining the Brecon & Merthyr in 1893, he subsequently became Assistant Secretary. At the grouping, Mr. Heard declined a post with the Secretariat Department at Paddington and later was appointed Secretary of a Residential Trust Company, which position he continued to hold. A funeral service was held on February 15, at St. Dunstan's Church, East Acton, and was followed by cremation at the Golders Green Crematorium.

We regret to record the death on February 7 of Mr. Frederick Holland, aged 64, who retired on December 1, 1947, as Divisional Engineer, Taunton, Great Western Railway. Mr. Holland was educated at Chester, and studied engineering subjects in London. He served his articles with the County Surveyor & Bridgmaster of Cheshire, and afterwards joined a firm of contractors and was employed as Assistant Engineer on sea defence works, sewage schemes and estate development. In 1907 he joined the Chief Engineer's staff of the L.N.W.R. at Euston, and in 1911 obtained a position as an Assistant Engineer with the Rhymney Railway, with which undertaking he remained until its absorption by the Great Western Railway in 1922. When the G.W.R. formed the Cardiff Valleys Division, Mr. Holland was posted to the Divisional Engineer's Office, where he remained until transferred in 1927 as Assistant Engineer in the London Division. In 1931 he was appointed Assistant Divisional Engineer, Taunton, and, in 1940, Divisional Engineer there. During the 1914-18 war he joined the Public Schools Battalion of the Royal Fusiliers and later obtained a commission in the Special Reserve, Cheshire Regiment. He served in Mesopotamia from 1916 with the 13th Division, and was also attached to the Royal Engineers for duty on the Mesopotamia Railways, and was mentioned in despatches. From 1927 until 1936 Mr. Holland was in command of one of the G.W.R. Construction Companies of the R.E. Supplementary Reserve. He retired on reaching the age limit, with the rank of Major. He was also co-ordinating officer between the G.W.R. and the War Office. Two of Mr. Holland's brothers retired recently from railway service, Mr. Harry Holland as Senior Assistant Architect on the headquarters staff of the L.M.S.R., and Mr. William C. Holland as General

Manager's Representative (Rates & Commercial), Central Argentine Railway. A portrait of Mr. Frederick Holland appeared in our October 31, 1947, issue. The funeral was held on February 10, at Taunton; among those at the service, in addition to family mourners, were:—

Messrs. M. G. R. Smith, Assistant Civil Engineer, Western Region (representing Mr. A. S. Quartermaine, Chief Engineer, Western Region); E. T. Davies, Divisional Engineer, Paddington; H. A. Alexander, Divisional Engineer, Bristol; A. N. Butland, Divisional Engineer, Taunton; H. A. G. Worth, Divisional Superintendent, Exeter; D. H. Hawkeswood, District Goods Manager, Exeter; A. W. H. Christison, Divisional Locomotive Superintendent, Newton Abbot; F. J. Prior, Assistant Divisional Engineer, Plymouth (representing Mr. N. S. Cox, Divisional Engineer, Plymouth); H. Nodder, Divisional Engineer's Office, Plymouth (representing the Permanent Way Institution); P. H. Spence, Assistant Divisional Engineer, Taunton; P. Eades, Chief Clerk, Divisional Engineer's Office, Taunton; A. W. Burt (representing Mr. A. W. Woodbridge, Signal & Telegraph Engineer).

Mr. W. G. W. Reid, on return from leave, has resumed as General Manager, Madras & Southern Mahratta Railway, relieving Mr. B. B. Varma, who has been placed on special duty with the Railway Board.

Mr. S. M. Jayawardena, A.M.Inst.T., Administrative Assistant to the General Manager, Ceylon Government Railway, whose death we recorded recently, was, after a period in the Clerical Service, selected as a Probationary Assistant Transportation Superintendent under the railway's scheme for training senior executive officers. He served at various stations in the Island, and, after completing his training in India, was appointed Assistant Transportation Superintendent and stationed at Colombo. Later he was transferred to the General Manager's Office as Administrative Assistant, which post he had held for some two years at the time of his death. He had been correspondent in Ceylon of *The Railway Gazette* since January, 1947.

Mr. H. R. Statham, who, as recorded in our January 7 issue, has been appointed District Commercial Superintendent (Passenger), Glasgow, Scottish Region, British Railways, was educated at Bowdon College and Densone College, and entered the service of the Great Central Railway, in the Secretary's Office at Manchester, in 1908. Two years later he qualified for the higher-grade scheme of training and during the next four years had experience in various departments. He was on active service from 1914 to 1919, first with the Manchester Regiment, and afterwards with the Railway Operating Division, Royal Engineers, attaining the rank of Captain. On returning to railway service, he became Assistant Stationmaster at Manchester (London Road), and he was appointed Assistant to the District Passenger Manager, Manchester, L.N.E.R., in 1923. In 1929 he was made Assistant London District Passenger Manager, and he went to Norwich as District Goods & Passenger Manager at the beginning of 1933. In January, 1944, Mr. Statham became District Goods Manager, Leeds, and, early in 1946, District Goods & Passenger Manager, Glasgow.

We regret to record the death on February 14, at the age of 75, of Colonel William Kelson Russell, late of the Royal Engineers and Deputy-Director of Transportation, 1916-19.

## Iranian State Railways

### Luncheon to M. Ezatollah Hedayat, Director General

Mr. A. J. Boyd, Managing Director, Metropolitan-Cammell Carriage & Wagon Co. Ltd., presided at a luncheon, given by British manufacturers of railway equipment, at the Savoy Hotel, on February 10, in honour of M. Ezatollah Hedayat, Director General, Iranian State Railways. There were present:—

Mr. T. J. Aldridge, Westinghouse Brake & Signal Co. Ltd.; Mr. L. B. Alexander, Metropolitan-Cammell Carriage & Wagon Co. Ltd.; Sir George Binney, United Steel Companies Limited; Mr. A. J. Boyd, Metropolitan-Cammell Carriage & Wagon Co. Ltd.; Mr. M. A. Crane, Beyer Peacock & Co. Ltd.; Mr. W. Goult, Manufacturers' Representative; M. Ezatollah Hedayat, Director General, Iranian State Railways; Mr. J. A. Kay, Editor, *The Railway Gazette*; Mr. E. Lawton, Superheater Co. Ltd.; Mr. R. H. Lee, J. Stone & Co. Ltd.; M. Mahvi, Assistant Director, Iranian State Railways; Mr. C. D. H. Macartney-Filigate, Tube Investments (Export) Limited; Mr. J. P. Metcalfe, Davies & Metcalfe Limited; Mr. N. Morris, J. Stone & Co. Ltd.; Mr. E. B. Rees, United Steel Companies Limited; Mr. H. J. Watkins, Montague L. Meyer Limited.

Mr. Boyd, in welcoming M. Hedayat to this country as a friend of long-standing, made reference to M. Hedayat's son, who at present is being educated at Stoneyhurst, and also to M. Hedayat's grandfather, who played an early part in the communications in Iran, in collaboration with the British cable companies. Continuing, Mr. Boyd said that he had brought together a number of friends who were anxious to help M. Hedayat in the task of re-equipping his railways, which played such a magnificent part in the struggle against Germany in the last war, by conveyance of equipment to Russia. They were anxious to do all they could to help the Iranian State Railways and to place the capacity of their works at his disposal. He was only sorry that M. Hedayat was here for such a short time and, indeed, hoped to see him again in this country very soon. M. Hedayat could be sure that they were profoundly conscious of the ties of trade and friendship which linked them to Iran, and which he hoped would be strengthened in the future.

M. Hedayat, who replied in French, sincerely thanked Mr. Boyd for his kind personal remarks and expressed his delight for the way he had been received in this country. He fully agreed with all the sentiments expressed by Mr. Boyd concerning the happy mutual relations that existed between Iran and this country. He was glad that they had been able to do what they could to help the allied cause during the war. It had been done, however, at the expense of exhausting the railway equipment, but he could assure Mr. Boyd and all his friends present, that he was most anxious that the requirements of the railway should be placed in the hands of British manufacturers. He was anxious to do all he could to foster the friendship and trade relations with Great Britain.

R.H.A. STICK-ON LABELS FOR CORRESPONDENCE.—Blue and yellow stick-on labels bearing the words: "Support Road Transport Under Free Enterprise" have been produced by the Road Haulage Association, in accordance with its policy of making it known that a great many hauliers still are independent and will remain so, even when the Transport Act is fully implemented.

## The North Eastern Region in 1948\*

*Survey by Mr. C. P. Hopkins, Chief Regional Officer, of the North Eastern Region's first year of operation*

The Railway Executive's task in 1948 was not enviable. It had to take over the four main-line railways and a host of minor ones, although many of these were joint between two or more of the main ones. It had to guide them in the organisational methods of the main-line companies, but with the important qualification that not one of those methods had been planned for or applied to anything so vast as the new combination.

In framing its organisation it had to avoid a high degree of centralisation that would involve an enormous admistratation at the centre with all the delays that its size must impose on the passage of information and instructions between that centre and the people outside, and with all the stultification of effort, the loss of enterprise and initiative, the inability to give quick local decisions, the lack of adaptability to quickly-changing conditions, that such super-centralisation must inevitably bring about.

The Executive further had to realise that with all the new problems that nationalisation must bring—and quickly—it was highly desirable, to say the least, for it to start with a system of organisation that would not contribute too many problems of its own, and could be relied on to keep the railways at work and continuing the struggle they had embarked on in 1945 or earlier to get back to normality from the worst effects of war. Therefore, the Railway Executive decided that, at least as a start, the framework of the railways' organisation should have some fairly close regard to what existed before the end of 1947.

A central headquarters was inevitable, as the Executive had to administer, maintain and operate, and would need a staff to frame the policies on which to do so. But to avoid over-centralisation on that headquarters, it decided on a regional basis of organisation, and six Regions were framed, fairly closely based on the administrative units in which the railways had been operating for so many years.

### Inherited Unity

That the North Eastern Region emerged as one of the six is due to its inherited characteristic of administrative and operational unity in the direct line of descent from the days of the North Eastern Railway, through those of the North Eastern Area of the London & North Eastern Railway. As the result of that inheritance it found itself equipped with a complete and efficient machinery of operation capable of dealing with the day-by-day exigencies of rail traffic movement, and therefore much better qualified than a newly formed Region would have been, to keep going and yet to be prepared to cope immediately with whatever changes the future might bring.

As an Area of the London & North Eastern Railway what is now the North Eastern Region was administered, under a Chief General Manager, by a Divisional General Manager who had his corps of Officers with Departmental responsibilities. They answered to the Divisional General Manager for the day-by-day operation of the Area. Policy (under the company's

board) was in the hands of the Chief General Manager, assisted in practice by the advice of all the Area Managers. Alongside the Area system there were officers in charge of "all-line" departments, whose activities applied to the line as a whole. These answered direct to the Chief General Manager, without supervision by the Area Managers, but with frequent "horizontal" contact with them. Broadly, the Area Manager was the focal point for instructions from higher authority and for the supervision of the Area Departmental Officers.

In discussing now how that organisation was fitted into what the Railway Executive had in mind, I must deal first with the duties and responsibilities laid down by the Railway Executive for itself. First, that body has the responsibility of taking collective decisions and of collectively giving effect to the decisions of the Commission. Secondly, the Executive Members have "functional" responsibilities, each Member undertaking the general direction of a Department or Departments of railway work, with the Chairman co-ordinating generally the work of the whole Executive.

In each Region, of course, the same departmental functions could be represented—as they have always been—by Departmental Officers. What the Railway Executive's new organisation aimed at doing was to make those Departmental Officers responsible to the appropriate functional Member of the Executive, who would be in direct relationship with them and give them instructions, guidance and leadership. Responsibility for policy, standards and principle would rest with the Executive, whose Members would thus have their channel of direct approach to the corresponding Regional Departmental Officers.

But an organisation framed only on this pattern would lead to over-centralisation with all its dire perils. The Executive and the Commission saw the danger and decided at the outset that the Regional organisation must be such as would enable matters of local importance to the Regions to be disposed of quickly in the Regions without cumbersome reference to headquarters. To give effect to that decision a Chief Regional Officer was appointed for each Region with responsibility for co-ordinating the efforts of all the Region's Departmental Officers in making effective the policy laid down by the Executive.

The newly-born North Eastern Region had, therefore, to adapt itself to the changed conditions operative under the new régime and this was done quickly. A team of departmental posts was inherited from the London & North Eastern Railway, but the constitution of the team was changed very soon to comply with the first moves made by the Railway Executive towards the introduction of a standard form of organisation among all the Regions. The first step was the establishment at York of a Labour & Establishment Officer with the status of a Regional Departmental Officer.

The Area organisation of L.N.E.R. days had provided for the supervision of staff matters on a Departmental basis, with the Chief General Manager through his Staff Assistant laying down policy, and the Divisional General Manager through his Staff Assistant controlling the work of the

Departmental Officers' Staff Sections. Under the new arrangements, operative from the early months of 1948, staff work, with its associated matters of welfare and medical services, became a Departmental responsibility, with the Regional Staff Officer looking on the one hand to the Railway Executive Member on matters of policy and principle, and on the other to the Chief Regional Officer on staff matters internal to the Region.

Another early change was the separation of the Signal & Telecommunications work from the Civil Engineering Department, of which it was formerly a part. The Signal & Telecommunications Assistant thus became a Regional Departmental Officer in his own right.

Then, for what had been L.N.E.R. "All-Line" Departments it was necessary to constitute new Regional Departmental Officers, since there had been no Area Officers for them before. So Regional Departmental Officers, with the same kind of responsibilities as other Officers to the Railway Executive and to the Chief Regional Officer, were appointed, and to keep down the initial cost of this conversion of "All-Line" Officers into Regional Officers they were all, in the first instance, made jointly responsible to the Chief Regional Officers of the Eastern and North Eastern Regions, and this sharing of responsibility continued throughout the year. The Departments concerned are those of Mechanical & Electrical Engineering, Accountancy, Treasury, Law, Press Relations & Advertising; with, in the case of the last three local sub-offices at the York Regional Headquarters.

I propose to look at what this part of British Railways has done during the past year, and show how the activities of the Region as a unit have been conducted during the year, and how those activities have been affected and governed by the policies enunciated by the Railway Executive.

### The Year's Performance

First as to the year's performance: With 11 per cent. of the country's track mileage and 9 per cent. of its staff, the Region accounts for 18 per cent. of its originating freight. Of the originating merchandise, we account for about 14 per cent.; on minerals, 18 per cent.; of coal class, about 19 per cent.; and of livestock, about 9 per cent. Our 1948 freight forwardings exceeded those of 1947 by 12 per cent., the figure for the whole country being about 7 per cent. Even in our merchandise traffic we achieved an increase of 4½ per cent., whereas British Railways as a whole reported a slight decrease. Of estimated net ton miles we account for about 9 per cent. of the total, and against the country's increase of 5 per cent. over 1947, ours was 10½ per cent. Compared with pre-war, and using a 1937 comparison as better than 1938 because the 1938 figures were down, our originating tonnage was 11 per cent. up and our net ton miles 13 per cent. up; the corresponding figures for all Regions showed a decrease in originating tons and about 15 per cent. increase in ton miles.

Our freight train miles per train engine hour this year head the Regions; over the year—taking bad weather with good, long hours of daylight with short, coal trains with goods—we threw out a figure of about 10 train miles per train engine hour, a figure that compares with about 8 for the country as a whole. In wagon miles per train engine hour again we top the list, with a figure of rather more than 300, against an all-country figure of 270.

\* Abstract of a paper read by Mr. C. P. Hopkins, Chief Regional Officer, North Eastern Region, to the Institute of Transport at Newcastle on February 11, 1949



What has been and is being done in the physical sense represents the fruits of a great deal of solid work by the Civil, Electrical and Signal & Telecommunication Engineering Departments. Their 1948 history is one of struggle to attack the heavy arrears of maintenance—the inheritance from the war—with which the year began, and they have devoted much of the very considerable skill of their Officers and staff to making some inroads into those arrears.

The Road Transport Executive has been busy during the year in doing two things. First is the setting up of its own organisation. Concurrently it has been dealing with the acquisition under the Act of numbers of road freight undertakings. These conjoint activities have occupied much of the time of the Members and Officers of the Road Executive and we—as a Region of the Railway Executive—have not yet been brought into the picture very much. But since "integration" is

the aim for British Transport, we, as railways, know the kind of thing that will be expected of us. We are already getting to know the newly-appointed Area Officers of the Road Transport Executive, and during the year we have been laying down the broad lines on which we shall be planning together the co-ordination of transport in those areas of the United Kingdom in which the North Eastern Divisional Manager and I shall have a common and close interest.

## Railway Carriage Construction\*

*Principal features of carriage building, with particular reference to a standard-type third-class corridor of former L.M.S.R. design*

The constructional form of a railway coach may appear to have changed little since its early days, but considering that a normal railway vehicle has a useful life of 35 to 40 years, and that renewals of stock are made on an annual basis, it will be appreciated that changes in construction, or design, will tend to be progressive rather than revolutionary.

The use of steel and development of various production processes, especially electric arc welding, has seen the progressive superseding of the former wood carriage. We now have the composite carriage of wood and steel as a standard and rapidly are developing the all-steel carriage. This evolution has tended to give superior physical and constructional characteristics, with improved maintenance aspects.

Though the design of vehicles is the responsibility of the chief mechanical engineer's carriage designer, his efforts must conform to the requirements of the chief operating superintendents and commercial managers, and the chief civil engineer defines loading and clearance limits for bridges, stations, and so on. The chief mechanical engineer decides general design, bearing in mind available works facilities, and production techniques. On the other hand, the metallurgists, the textile and paint experts, along with the foremen, inspectors, works technicians and shop operatives, play their part in design by suggestions derived from intimate knowledge of their part in the constructions.

The carriage designer must bear in mind the requirements of the passenger, which include good riding, a pleasant interior and a comfortable seat, as well as being able to enjoy the scenery and arrive fresh rather than travel weary, must be given the attention they demand.

The building of a modern main-line carriage employs twenty-one different craft trades and approximately 3,000 separate detail parts, covered by a multitude of materials; the preparation of detail parts is confined to specialised detail-manufacturing shops.

The axle, wheel centre, and outer replaceable tyre are manufactured as finished units before assembly. At Derby, Regional requirements are concentrated in a wheel shop laid out in progressive sequence and capable of an output of 600 pairs of wheels of all types per week.

In the preparation of other details from steels of various grades, cutting and

machining from bar, form bending, smithing, forging and drop-stamping, oxy-acetylene cuttings and fabrication by welding are common production methods. Drop-stamping, using hammers from 8 cwt. to 3 tons in weight, describes the working to a desired shape, of a hot slab of metal between split impression dies. Some heavy stampings necessitate preliminary forging work and typical of these is the carriage drawbar. In this case steel billets 63 lb. in weight and of a tensile strength of 32 to 38 tons per sq. in. are first forged at white heat (under a 30-cwt. steam hammer) to a rough size and shape, an operation calling for a high degree of skill from the forgerman. After re-heating the forging is stamped to the requisite shape between finishing dies, in a 3-ton drop-hammer.

Improved welding technique has enabled many components, previously manufactured by blacksmiths, together with a number formerly cast, forged, or stamped, to be manufactured by fabrication welding, and this method is an increasing feature of production, even so it still is necessary to utilise age-old smith methods in the production of a few carriage components, examples being roof ironwork and the manufacture of the side bearing spring. The foundries still maintain their contribution in the form of the wheel axlebox and bearing, the carriage pivot castings, buffer castings and brake blocks.

Most items produced in the foundry, forger, drop-stamp and smithy shops require a degree of machining and fitting and a well-appointed shop is maintained for this purpose. Machinery installed includes horizontal and vertical milling machines, grinding, turning, drilling, shaping and planing machines and oxy-cutting machines. Some 10,000 items are dealt with each day.

Timber still is prominent in the body construction, with teak as the normal standard for framing members, although of late other substitutes, such as oak and multi-ply section, of necessity have been used. Some of the timber used in construction is bought from timber merchants in easily convertible scantling and plank sizes, but many items are manufactured from wood which enters the workshops in tree form, and is passed through a conversion sequence of band-saws and crosscut saws, to emerge in sizes suitable for milling to finished dimensions.

In the conversion of a tree there is a percentage of waste; an average of 70 per cent. can be regarded as a normal figure for usable material on actual carriage, or wagon construction, the remaining 30 per cent. being converted for miscellaneous small items, such as permanent-way rail keys, or ferrules, so that only the outer

layers of bark and sapwood can be regarded as scrap and this normally is sold as firewood.

Overall factory requirements call for the conversion of some 210 trees a week, out of an average stock of 6,000 trees of all wood varieties, including home-grown and Empire logs. Apart from the body framing, the main use for wood in carriage construction is in interior finishing and lining of the body.

### ASSEMBLY

The progressive system of carriage building involves the vehicles passing through forty stages to completion and is in the following main stages:—

Bogies and underframe construction.  
Erection of body shell and exterior panelling.

Interior finishing—installation of heating and lighting system

Exterior painting and final testing

The progressive tendency is in contrast to coach-building of some years ago, when the carriage was built-up from its floor on trestles and remained in the same position until completion.

The frame shop concerned with the bogie and underframe construction is a combined fabrication department for all main framing details, together with the necessary assembly layouts for the building sequences; thus, rolled steel channels, angles, plates, and so on, are fed in at one end of the department from the outside stack yard and emerge from the other end as finished bogies and underframes.

An essential feature in bogie construction is the need to build a square frame, otherwise wheel alignment and riding comfort would be affected; jig assembly controlled from the wheel axle centre lines, plays a prominent part in the assembly of the frame following unit preparation of the various members. Within recent years, arc welding has been standardised for carriage frame and bogies construction and has simplified both design and constructional operations, by eliminating the necessary preparation of such details as joint angle brackets, gusset plates, and the drilling entailed for the former riveted frames. Consequently, frame members now require little more than cutting to length and shape before assembly by welding, and to assist in the welding the frame is turned through 360 deg. to permit gravity, or down-hand welding, at all joint positions.

The underframe usually is designed to carry its own weight and the added weight of the lighting batteries and dynamo and the brake cylinders, as well as the body and the passenger load. It must be strong enough to withstand, without damage, the drawbar load stresses and the heavy shocks suffered in shunting.

Early underframes were wood, reinforced by iron plates, tie bolts and iron trusses, but improved steel-manufacture and rolling-mill technique provided long rolled-steel sections and the all-steel riveted

\* Abstract of a paper entitled: "The Construction and Building of Railway Carriages," read before the Railway Students' Association, London School of Economics & Political Science, on February 9, by Mr. A. E. Bates, Carriage & Wagon Works Superintendent, Derby, London Midland Region

frame structure. Developments in electric arc-welding brought the present-day standard welded underframe, similar in design, but simpler and lighter.

The design of the frame is in the form of a long rectangular structure built up from heavy rolled steel sections of 10 in. in depth suitably reinforced at either end to withstand buffer shocks and drawbar pull, and trussed to overcome any tendency to sag; the truss frame also serves as support for the lighting cells and regulator.

The present standard of body structure is a composite one of wood and steel, made possible by the use of welding in its construction. The body structure formerly was entirely of timber, with timber bottom, sides and floor, and the complete body was bolted to the underframes via rubber cushion blocks. Today, with the increased utilisation of steel and the improved physical characteristics arising, the practice is to weld direct to the underframe solebar

flanges, socket brackets into which the teak body framing pillars are located and secured by bolting. Complete and robust steel end structures also are welded direct to the underframe, compartment partitions are fixed, and an all-steel roof structure is built *in situ* on the body framing and welded in position.

The interior finishings may be referred to as the facing timbers, or interior decoration necessary to cover the framing, or shell of the carriage. Such pieces of finishings include compartment panels and corridor partitions, body-side three-ply panelling, also lavatory cabinets, and various facing moulds, all produced as finished units polished ready for securing into position.

In painting a railway carriage, exterior decoration must be coupled with treatment suitable to stand up to deterioration promoted by the severe treatment in service, for instance, the effects of smoke, dust and

grit and the daily washing required to maintain a good appearance. Our present paint schedule provides for oil base paints and for brush painting of seven coats of paint including two of Primer followed by three coats of varnish over the body, with three coats of paint to the roof. The underframes receive two coats of paint, with the exteriors of solebars, headstocks and buffer castings, also varnished.

From the time of its construction to the end of its useful life, rolling stock is subject to rigorous and planned inspection. All independent works inspection departments are responsible for the inspection and maintenance of the requisite quality, of all works manufactured detail parts, and the vehicle assembly at all stages. Thus, when the carriage has been built, the final test, carried out on a specially-equipped test road, is concerned primarily with the functioning of the various systems and checking the vehicle as a unit.

## French Minister of Transport in London



M. Christian Pineau, French Minister of Transport, and French transport officials with Sir Cyril Hurcomb, Chairman, British Transport Commission, and Lord Latham, Chairman, London Transport Executive



M. Pineau and his party visiting the signal box outside Waterloo Station where they were received by Mr. S. W. Smart, Superintendent of Operation, Southern Region



Dinner given by the British Transport Commission at the Great Western Royal Hotel, Paddington, on February 10 to the French officials and Madame Pineau

## New Southern Region Locomotive Named "Sir Eustace Missenden"

*Ceremony at Waterloo Station on Tuesday*

On Tuesday last a new "Battle of Britain" Class locomotive, No. 34090, was named at Waterloo Station by Sir Eustace Missenden, O.B.E., Chairman of the Railway Executive. The engine was named *Sir Eustace Missenden* and carries the coat of arms of the Southern Railway as a token of the work which was carried out by the railway staff at the time of the Battle of Britain. Sir Eustace Missenden was accompanied by Mr. John Elliot, Chief Regional Officer, Southern Region.

Among those present were:—

Lt.-Colonel Sir Alan Mount, Chief Inspecting Officer, Ministry of Transport; H. L. Smedley, Legal Adviser & Solicitor, Railway Executive.

*Southern Region:* John Elliot, Chief Regional Officer; R. M. T. Richards, Deputy C.R.O.; C. Grasemann, Public Relations Officer; O. W. Cromwell, Chief Officer for Labour & Establishment; S. W. Smart, Superintendent of Operation; T. E. Chrimes, Motive Power Superintendent; O. V. Bulleid, Chief Mechanical Engineer; R. P. Biddle, Docks & Marine Manager.

*Retired Southern Railway Officers and Guests:*—W. J. England; H. E. O. Wheeler; R. G. Davidson; Colonel P. M. Brooke Hitching; D. R. Lamb, President Institute of Transport; J. A. Kay, Editor, *The Railway Gazette*.

During the war Sir Eustace Missenden was General Manager of the Southern Railway, and under his direction the movement of millions of troops and thousands of tons of Government material was carried out. He was responsible at the time of Dunkirk when one of the most complicated railway operations of all time was enacted, and again on D-Day, when the Southern Railway bore the heavy burden of conveying men and materials to the docks for shipment overseas.

With Sir Eustace Missenden was a Guard of Honour specially chosen from all grades of the staff who themselves had had a front line job in the war. These men and women represented the 67,000 Southern Railway workers who gave long hours of devoted service during the war years. Porters, signalmen, drivers, guards—all were represented. Among them were two George Medalists, one O.B.E., and three B.E.M.s. In their ranks also were two retired railwaymen from Missenden House, which was opened in 1947 for aged and retired Southern Railwaymen and their wives. The names of the members of the Guard of Honour were:—

J. Fowles, D.S.M. (Watchman, ex-sailor, Southampton Docks); J. T. Henneker (Ambulance Attendant, Ashford Works); A. R. E. Brunger (Fitter, Ashford Works); J. H. Monks (Foreman, Deal); R. Barclay, B.E.M. (Lineman, Blackfriars); A. Bruin (Shunter, Hither Green); G. H. Siedman (Signalman, Tonbridge); A. Bryant (Passenger Guard, Victoria); H. Berriman (Porter, Waterloo); W. T. Price (Inspector, Waterloo); Miss J. Hamilton (Ticket Collector, Waterloo); Mrs. A. Barry (Temporary Porter, London Bridge); W. Brereton, B.E.M. (Police Constable, Waterloo); A. A. Harrison (Goods Agent, Blackfriars); A. W. Edwards (Working Foreman, Bricklayers Arms); A. J. Hillyard (Checker, Nine Elms); R. V. Smith (Goods Porter, Woolwich Goods); G. J. Lark (Driver, Nine Elms); G. G. Pritchard (Fireman, Nine Elms); H. E. Cooper (Leading Motorman, Streatham Hill); G. H. Leach, G.M. (Lengthman, Aldershot); C. Steele, R.E.M. (Ganger, Queenborough); J. Knight (Retired Permanent Way Ganger, Holborn Viaduct); F. Newnham (Retired Parcel Porter, Woking). The two last-named are from Missenden House.

Mr. John Elliot, Chief Regional Officer, expressed the pleasure of past and present Southern Officers and staff that Sir Eustace Missenden had agreed to their suggestion that one of the "Battle of Britain" class engines should bear his name. For more than six years he had been General Manager, during one of the most difficult periods of the Southern's history and, much as they regretted his departure, they took it as a compliment to the Southern that their old Chief had been selected as Chairman of the Railway Executive.

Sir Eustace Missenden, in naming the engine, said that when he undertook the responsibilities of General Manager of the Southern Railway six days after the war was declared in 1939, they had not envisaged the intensity of the onslaught which they would be called on to face. The Southern Railway, from June, 1940, until May, 1941, had had to meet a persistent attack on its system, but, with a team of loyal and energetic officers, and with the unfailing endeavours of courageous staff, they had managed to keep the lines open and to meet the heavy demands of transport to sustain the life of the people, to re-create the national armoury, and to send forces into the field of battle.

It was appropriate that this ceremony should take place at Waterloo, for it recalled to his memory something said by a wartime Minister of Transport—"the second Battle of Waterloo concerned not armies but railways, and the Southern Rail-

way has achieved as big a victory as ever had been seen."

Mr. Winston Churchill, in Volume II of his book *Second World War*, said that after Dunkirk "there was a white glow, overpowering, sublime, which ran through our Island from end to end." Sir Eustace Missenden said that he had thought of the Southern Railway men and women, the signalmen coming on duty at 10 o'clock at night, groping their way through the darkness to their Signal Boxes, often perched high over the railway, often being by themselves throughout the night, signalling the trains; the shunters finding their way to the depots and shunting yards, to keep the wagons moving during the night; the drivers and the firemen, the motormen, the guards, the station staff, the indoor staff, all played their part very courageously. Not one application did he remember seeing during the whole of that time of any man, woman, or boy asking to be transferred to a safe area. Who could help being proud of having such a gallant crew as there was on the Southern Railway during the war?

This locomotive would bear his name, but he regarded that only as a symbol. He would like all his fellow railwaymen and women of the former Southern Railway to feel in some special way that this engine was a token of their united endeavours during those hectic and strenuous years of the war. During that period they had been able to assess anew those special British qualities of human understanding, of toleration, good humour and good faith, and he knew that all who were still carrying on with railway work would apply them in the new task of creating a co-ordinated system of national transport.

He then unveiled the nameplate.

## Transfer of the London Tilbury & Southend and Adjacent Lines to the Eastern Region

The transfer from the London Midland Region to the Eastern Region of the following lines will take effect on and from Sunday, February 20: the London, Tilbury & Southend line; the former Tottenham & Hampstead joint line east of the site of St. Anns Road Station; the London Midland Region line from its junction with the former Tottenham & Hampstead joint line immediately east of South Tottenham Station to Woodgrange Park Junction; and the Tilbury-Gravesend ferry service (excluding the landing stages at Gravesend, which will be transferred to the Southern Region).

As from that date the supervision of these lines for operating purposes will be by Mr. J. W. Dedman, District Operating Superintendent, Southend District, Eastern Region, with his headquarters at Fenchurch Street Station. The Eastern Region lines from Fenchurch Street to Bow Junction and Stepney East Junction, and Salmons Lane Junction to Blackwall and Millwall, at present part of the Stratford Operating District, will be transferred to the Southend District as from the same date.

The District Commercial supervision will be undertaken by the following Eastern Region District Officers: (Passenger) Mr. L. J. Moorcock, London District Passenger Manager; (Goods for Stations: Commercial Road; Bromley to East Ham inclusive; Dagenham Dock to Thames Haven inclusive, *via* Tilbury; Stanford-le-Hope; Leyton, Leytonstone, and Woodgrange Park) Mr. A. E. Marriott, London City Manager; (Goods

for Stations: Barking to Shoeburyness (*via* Upminster) inclusive; Ockendon; Romford; South Tottenham, Black Horse Road, and Walthamstow, Queens Road) Mr. K. A. Kindon, London Suburban District Goods Manager; (Coal for Stations: Commercial Road; Bromley to East Ham inclusive; Dagenham Dock to Thames Haven inclusive; *via* Tilbury; Stanford-le-Hope; Leyton, Leytonstone and Woodgrange Park) Mr. C. R. Donington, London District Mineral Agent; (Coal for Stations: Barking to Shoeburyness (*via* Upminster) - inclusive; Ockendon; Romford; South Tottenham, Black Horse Road, and Walthamstow, Queens Road) Mr. K. A. Kindon, London Suburban District Goods Manager.

The London Tilbury & Southend line, with the line east of St. Anns Road Station to Woodgrange Park Junction, will form a separate district of the Motive Power Department to be known as the Southend District, and the headquarters will be at Plaistow with sub-depots at Shoeburyness, Tilbury, and Upminster. Mr. R. D. Gardiner is temporarily acting as District Motive Power Superintendent.

Press and Public Relations matters will be dealt with by Mr. George Dow, Press Relations Officer, Eastern & North Eastern Regions.

INSTITUTION OF LOCOMOTIVE ENGINEERS.—The annual luncheon of the Institution of Locomotive Engineers will be held at the Dorchester Hotel on Friday, March 25, at 12.45 for 1 p.m.



## Notes and News

**Draughtsman Required.**—A draughtsman, with some experience in tramway or railway permanent way switches, crossings, and layouts is required by Samuel Osborn & Co. Ltd., of Sheffield. See Official Notices on page 195.

**Draughtsman (Civil Engineering) Required.**—Applications from qualified candidates are invited for the post of draughtsman (civil engineering) required by the Nigerian Government Railway, for one tour of 18 to 24 months in the first instance. See Official Notices on page 195.

**London-Paris Services.**—In an editorial article, "London-Paris Services," in our February 11 issue, it was stated that the Dover and Dunkerque night ferry service, with through Wagons-Lits sleeping cars between London and Paris, commenced in October, 1937. This should have been October, 1936.

**Mansion House Association on Transport.**—Sir Cyril Hurcomb, Chairman of the British Transport Commission, will be the principal guest at a luncheon to be held by the Mansion House Association on Transport at the Trocadero Restaurant, London, W.1, on Friday, March 25. Mr. W. H. Gaunt, President of the Association, will be in the Chair, and the luncheon will be followed by the annual general meeting.

**British Railways (Western Region) London Lecture & Debating Society.**—Mr. Miles Beevor, Chief Secretary & Legal Adviser, British Transport Commission, will read a paper on: "The Work of the British Transport Commission," to British Railways (Western Region) London Lecture & Debating Society, on March 3. The meeting will be held in the Clerks' Dining Club, Bishop's Bridge Road, Paddington, at 5.45 p.m.

**Spanish Express Derailed.**—Twenty-eight passengers were killed and twenty-four injured, some seriously, when a Barcelona-Madrid express was derailed near Tarragona early on February 12. Two Britons were believed to be among the dead. The accident is thought to have been caused by a subsidence of the embankment. Three coaches plunged 100 ft. into a dry river-bed and were completely destroyed. Reports of sabotage, which said that part of the track had been removed, are unconfirmed. At the time of the accident the train was travelling at over 50 m.p.h.

**Restoration of European Communications.**—Extent of the progress made in restoring communications in Europe since the war, may be gauged by a comparison of the February, 1949, issue of *Cook's Continental Timetable* with that for November, 1946, which was the first post-war public issue. The latest issue contains 370 pages, which is an increase of 132 over the 1946 issue, while the index occupies 15 pages, as compared with 9, and there are seven pages of passport information, two more than in the November, 1946, issue. The timetable now includes 718 tables of railway and steamship services, covering 1,200 routes, against 465 tables covering 750 routes, and countries which have been added are Germany, Hungary, Roumania, Poland, and Cyprus. Seven new features are: distances between railway stations in principal towns; maps of 19 cities showing the railway termini;

foreign geographical names with corresponding English forms; explanation of travel signs in four languages; motorbus services between London termini; Irish steamer services; and special tables for "named" international express trains.

**Institution of Electrical Engineers.**—At a meeting of the Institution of Electrical Engineers, Savoy Place, London, W.C.2, to be held at 5.30 p.m., on March 3, Mr. H. J. van Lessen will read a paper on: "Electric and Diesel-Electric Traction on the Netherlands Railways."

**Institute of Transport, Metropolitan Section.**—A paper entitled: "Traders and the Transport Act, 1947," will be read by Mr. A. G. Marsden, before the Institute of Transport, Metropolitan Section, on March 7. The meeting will be held at Livingstone House, Broadway, London, S.W.1, at 5.30 for 6 p.m.

**Oxford University Railway Society.**—On February 9, Mr. T. Levatt Williams read a paper to the Oxford University Railway Society on: "The Locomotives of the Former London & North Western Railway," with recollections of his foot-plate experiences as a pupil of the Chief Mechanical Engineer, at Crewe Works. After discussion the meeting closed with a vote of thanks proposed by the President, Dr. G. D. Parkes.

**Metropolitan-Vickers Rubber Resilient Gear Wheels.**—Metropolitan-Vickers Electrical Co. Ltd., Trafford Park, Manchester, has asked us to make it clear that in the article "Power Bogie Transmission Gears" in our December 31, 1948, issue, the rubber resilient gear wheels described and illustrated, and the helical spring-type wheels, are of Metropolitan-Vickers design and manufacture, and that already many sets are in successful operation. The firm has supplied this type of wheel to the South African Railways for 28 electric locomotives and 54 motor coaches, and at present is supplying 556 gear wheels of this type to the Netherlands Railways, in addition to many hundreds supplied on tramway equipments.

**Demand for "Carry On" Increasing.**—Demands for personal copies of this British Railways staff magazine have increased considerably, and in this connection the Editor of *Carry On* makes a special appeal in the February issue. He points out that for economic reasons it is not possible to increase the circulation of the magazine, which at present is distributed free of charge, and the question of making a charge of 3d. a copy now has to be decided. This suggestion comes from readers who wish to be sure of receiving a personal copy. Readers are asked, therefore, to fill in a coupon printed on the back cover of the February issue, stating whether they are willing to pay 3d. a month for the magazine.

**"Chu Chin Chow" by L.M.R.**—For three nights and a matinee last week at the Scala Theatre, the London Midland Region (London) Amateur Musical Society gave greatly appreciated performances of "Chu Chin Chow." The cast and orchestra numbered over 100. Outstanding principals were Mr. Fred Bishop as Ali Baba, Mr. John Pegg as Abu Hassan, Miss Jessie Wilson as Alcolom, Miss Ursula Davis as Marjanah and Miss Lucy Sander as Zahrat Al-Kulub. Mr. G. L. Darbyshire, Chief Regional Officer, L.M.R., supported by most of his officers

and a number of guests from other regions and traders attended the opening performance on February 10. At the close Mr. W. P. Bradbury, Chairman of the Musical Society, and who is shortly retiring from the Chief Commercial Managership of the London Midland Region, in a brief speech from the stage, congratulated the members of the Musical Society on the entertainment, and speaking on behalf of Mr. Darbyshire and all the regional officers, expressed their pleasure at the presence of so many representatives of the trading community.

**Fractionating Tower Film.**—A film entitled: "A Tall Order," which deals with the construction of a 100-ft. high-fractionating tower, made by G. A. Harvey & Co. (London) Ltd., to the order of the Lummus Company of New York, on behalf of Shell Refining & Marketing Co. Ltd., was shown at the British Council film theatre, Hanover Square, on February 3. Early last year the tower made a tortuous journey through London, before being towed to its destination at Punta Cardon, Venezuela, and in the film, the history of its construction is traced from the designing board stage to its erection in South America.

**Semastic Tiles for Deck Covering.**—Five contracts have been placed for the first ocean-going vessels to have their decks covered with Semastic tiles made by Semtex Limited at the former Nuffield shadow factory at Castle Bromwich. Each of these ships, which are being built on the Tyne, will have 700 sq. yd. of tiles, laid in public rooms as well as in passages and accommodation spaces. One of the vessels is a molasses tanker of 7,400 tons and the remainder are Silver Line boats of 6,200 tons each. Semastic tiles are made in a range of 15 plain and marble shades from synthetic resin binder, fibrous mineral fillers, and rich non-fading pigments, calendered under high pressure into sheets of uniform thickness, and precision cut into tiles 9 in. x 9 in. sq. and  $\frac{1}{2}$  in. to  $\frac{3}{8}$  in. thick. Tests carried out in collaboration with the Ministry of Transport on the deck of a B.O.A.R. leave ship showed that the tiles give maximum resistance to wear.

**South African Railways Tenders.**—The South African Railways have called for bids to supply the following equipment: Tender No. 8193. Six  $\frac{1}{2}$ -ton, heavy-duty, diesel engine driven locomotives, suitable for operating on 2-ft. gauge track of 18-lb. rail; specifications include a maximum tractive effort at the wheels of not less than 1,600-lb. weight and maximum speed not less than 9 m.p.h. in either direction; power units not less than 30 h.p. and chassis capable of operating over construction track with a minimum radius of 20 ft. The tender closes at 9 a.m. Thursday, March 10, 1949; Tender No. 8533. Ninety-seven overhead electrical travelling cranes of capacities ranging from 75 tons to 2 tons, for new workshops at Koedoespoort, Rossburg, Germiston, Bloemfontein, Salt River, and Pietermaritzburg. The tender closes on Thursday, June 9, 1949, and deliveries are to be made 1950-51; Tender No. 8511. Twenty-two light industrial-type tractors complete with tools, also spares for maintenance purposes. The tender closes 9 a.m. on Thursday, March 31, 1949. Tender forms for the above with full particulars, may be obtained from the Chief Stores Superintendent, Room 309A, Park Chambers, Rissik Street, Johannesburg. Completed

## OFFICIAL NOTICES

## Crown Agents for the Colonies

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

**DRAUGHTSMAN**, preferably with some experience in tramway or railway permanent way switches, crossings and layouts. Apply in writing, stating age, experience, and salary required to: THE SECRETARY, SAMUEL OSBORN & CO. LTD., P.O. Box No. 1, Sheffield, 3.

**MECHANICAL APPLIANCES FOR HANDLING RAILWAY TRAFFIC**. By G. Bulkeley. An explanation of the employment of mechanical apparatus for handling and carting general goods. Cloth, 7½ in. by 5 in. 132 pp. Illustrated. 5s. By post 5s. 3d.

tenders must be addressed to the Chairman of the Tender Board, P.O. Box 7784, Johannesburg, and arrive before the above mentioned times.

**Road Haulage Association**.—The annual general meeting of the Road Haulage Association will be held at 10.30 a.m. on Friday, April 8, at Beaver House, Great Trinity Lane, London, E.C.4.

**Railway Catering Wages Reviewed**.—The claim by the N.U.R. for a wage increase of 12s. 6d. a week for 14,000 workers in British Railways catering departments was considered by the National Arbitration Tribunal on February 9. The findings of the N.A.T. will be submitted to the Ministry of Labour in due course.

**Scottish Region Christmas Tree Displays**.—The special Christmas tree displays on behalf of charitable and deserving organisations featured by the Scottish Region at some of the principal stations in Scotland met with a generous response from the public. Contributions totalled £1,886 10s. 9d. in cash and 4,087 books and other gifts.

**Railway Boxing Contests**.—The Railway Executive announces that 346 entries have been received for the British Railways amateur boxing championship. The eliminating tests, which are now taking place in all parts of the country, will be over by the end of this month, and the semi-finals and finals will be held at the Seymour Hall, London, on March 29.

**Tilling Motor Services**.—The net profit for the 18 months to December 31, 1948, was £596,272, against £313,928, and an amount of £300,000 is carried to general reserve, compared with £100,000. Tax free ordinary dividend for the period is increased to 15 per cent., against 10 per cent., tax free, for the previous year, with a final payment of 5 per cent.

**Ottoman Railway Holding Co. Ltd.**—Speaking at the annual general meeting of the Ottoman Railway Holding Co. Ltd. on December 30, Mr. R. P. W. Adeane, Chairman of the company, said that they had obtained complete settlement of the outstanding coupons of the Turkish 1935 bonds, enabling a payment of 1s. 1½d. a bond to be made. The unpaid half of coupon No. 5 has been converted into sterling by the Ottoman Bank, enabling the sum of 1s. 11d. to be paid. The settlement was the upshot of a visit made by one of the directors to Turkey. So far as the company's funds were concerned, the possibility of a distribution in the near future was being kept in mind. The book

value of remaining investments was only £21,000 and their market value some £35,000. Remaining investments were represented mainly by holdings in nationalised companies from which a cash distribution was expected. Cash in hand had been increased to £650,000. There was nothing to report in respect of the Greek Government Debt.

**Applications** from qualified candidates are invited for the following post: **DRAUGHTSMAN (CIVIL ENGINEERING)** required by Nigerian Government Railway, Capital Works, for one tour of 18 to 24 months in the first instance. Fixed basic salary according to age and experience up to £970 a year, including expatriation pay. Outfit allowance £60. Free passages. Candidates must have had good experience in drawing office of a Civil Engineering Railway Department (for Consulting Engineers or Contractors with practice in railway work). Knowledge of design and construction details of civil engineering structures and railway track work is required, including ability to take off quantities, prepare estimates and draft general specifications. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/17417 (3D) on both letter and envelope.

**Manchester Ship Canal Company**.—The directors of the Manchester Ship Canal Company at a meeting on February 11 resolved to recommend at the ordinary general meeting to be held on February 28 dividends of 3½ per cent. on the Manchester Ship Canal Corporation preference stock, 5 per cent. on the preference shares, and 2½ per cent. on the ordinary shares. Net revenue for the year, after deducting interest and fixed charges and provision for tax and reserves, was £331,956 (last year £292,584).

**Devon General Omnibus & Touring Company**.—The net profit last year was £177,753, which compares with £154,754 for the previous twelve months, after providing £40,663, against £30,274, for depreciation and £36,000, against £95,000, for payment of tax. The final dividend will be 10 per cent., plus a 15 per cent. bonus, making 35 per cent. for the year, which is the same as last year. An amount of £100,000 is being transferred to reserve, against £117,241, and there remains £127,721, against £94,243 to be carried forward.

**Scottish Region Bridge Rebuilding**.—Work on the reconstruction of the bridge carrying Nithsdale Road over the railway at Pollokshields West Station on the Scottish Region began on February 7. Although this constitutes a big scheme, there will be no dislocation of, or any alteration in, local train services. Most likely the work of reconstruction will take two years, during which there will be considerable disruption of road traffic, including the closing of certain streets and interference with the Mount Florida-Paisley Road tramway services.

**London Midland Region Exhibition on Fuel Saving**.—Half-hour film shows, brains trusts, and working models emphasising how to save fuel were features of the L.M.R. Fuel Exhibition which was opened at Euston Station at 10 a.m. on February 14 by Mr. G. L. Darbyshire, Chief Regional Officer, London Midland Region, and continued for five days. A point which was stressed at the exhibition was that the London Midland Region consumes 5,000,000 tons of coal a year and that even one small piece of coal

**INTERNATIONAL RAILWAY ASSOCIATIONS**. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d.

**RAILWAY AMALGAMATION IN GREAT BRITAIN**. By W. E. Sinnett. An authoritative account of the course of railway amalgamation in Great Britain up to the end of 1923. Cloth, 8½ in. by 5½ in. 276 pp. 15s. By post 15s. 7d.

**THE WORK OF THE RAILWAY CLEARING HOUSE, 1842-1942**. An account of the development and extent of the activities of this famous British railway institution. Paper, 9½ in. by 6 in. 24 pp. Illustrations. 2s. 6d. By post 2s. 8d.

**RAILWAY STORE METHODS**. By W. H. Jarvis. Great Western Railway. The necessity for training officers—Organisation of stores department—Stores accounts. Cloth, 7½ in. by 5 in. 116 pp. With diagrams. 4s. By post 4s. 3d.

saved and one light less when not really required help in the national economy. Models were lent by the Ministry of Fuel & Power, National Coal Board, and others.

**Freight Road Haulage Sub-Contractors**.—Instructions have been issued by the Road Transport Executive to all its road haulage freight undertakings that sub-contractors engaged by them are to be paid the full rate obtained from the consignor, less a commission not exceeding 10 per cent.

**Reduced Oil Prices**.—Shell-Mex and B.P. announce a reduction, as from February 9, of ½d. a gal., or approximately 10s. a ton, in the price of Shell gas oil for diesel engines and other industrial purposes, and, from the same date, a reduction of ½d. a gal. in the price of Derv fuel for road vehicles.

**Hadfields Limited**.—The group net profit for the nine months ended September 30, 1948, totalled £185,733, while that of the parent company, at £147,511, compares with £142,279 for the previous year. A final ordinary dividend of 8 per cent. is recommended, making 13 per cent. for the nine months, as compared with 17½ per cent. last year.

**House Flag for British Railways Ships**.—Ships in the British Railways fleet are to have a new house flag. Its design consists of a blue ground with white diagonals, lined red, with outer white edging; superimposed on a blue base in the centre of the flag, is the British Railways badge, a lion in yellow, astride a wheel in red and white. The flag will be hoisted simultaneously on all ships in the fleet shortly.

**"Please Be Careful" Poster**.—In 1948, 285 persons were prosecuted by the Railway Executive for entering, leaving, or opening carriage doors of trains in motion. About once a week a person is injured as a result of passengers opening railway carriage doors before their train stops. A new poster issued by British Railways draws attention to the danger of this practice, and appeals to passengers to "Please Be Careful."

**Passenger Facilities**.—A synopsis of the facilities provided by British Railways, Eastern Region, for passenger journeys and the conveyance of merchandise and luggage by passenger train, is contained in a booklet published recently, entitled: "Passenger Train Facilities, Eastern Region." Although it was not possible to give full details of charges, or a complete description of facilities, much useful information has been compressed into the 63 pages of this pocket-sized booklet. A section deals with tickets—the basis of

fares, availability by alternative routes, specimen fares, and cheap rates—and among the facilities covered by other sections are refreshment and dining rooms, hotels, luggage, seat reservation, and arrangements for the provision of private motorcars. A comprehensive list of stations, with details of their accommodation, is followed by addresses of ticket agencies and railway maps of the Region.

**Tilling's Final Dividend.**—Thomas Tilling Limited has announced a final dividend on the ordinary stock of 5 per cent., making 10 per cent. for the year ended December 31, 1948. A special capital profits dividend is to be paid to ordinary shareholders consisting of £20,600,000 of 3 per cent. British Transport Stock 1968-73, representing part of the consideration of sale to the British Transport Commission, and is in the proportion of £5 B.T. Stock for every £1 Tilling ordinary stock held. The company's statement shows a net profit of £424,410, against £532,318 for 1947, a reduction of £107,908, resulting from the agreement with the B.T.C. under which the company accounted to the Commission for dividends received since January 1, 1948, in respect of the holdings transferred and received in lieu thereof 3 per cent. on the purchase consideration.

### Forthcoming Meetings

February 21 (Mon.).—Institute of Traffic Administration, Merseyside Centre, at the Adelphi Hotel, Liverpool, at 7.30 p.m. "Managerial Initiative in Large-Scale Undertakings," by Mr. J. A. Dunnage.

February 22 (Tue.).—Institute of Transport, Metropolitan Graduate & Student Society, at 80, Portland Place, London, W.1. "A History of Labour Conditions in the Transport Industry," by Mr. A. R. Palser.

February 23 (Wed.).—Permanent Way Institution, London Section, at Denison House, 296, Vauxhall Bridge Road, S.W.1, at 6.30 p.m. "Long Welded Rails on L.T. Tracks," by Mr. H. C. Trissler.

February 23 (Wed.).—Institution of Railway Signal Engineers, at the Westinghouse Brake & Signal Co. Ltd., Chippenham, Wilts., at 7.30 p.m. "Typical Signal Control Circuits," by Mr. J. P. Loosemore.

February 23 (Wed.).—Institute of Welding, at 12.30 for 12.45 p.m. Luncheon at the Café Royal, Regent Street, London, W.1. Principal guest, Sir John Greenly.

February 24 (Thu.).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, St. Thomas' Street, London Bridge, at 5.45 p.m. "Track and Ballast Renewal in Polhill Tunnel," by Mr. A. H. Cantrell, London East Divisional Engineer, Southern Region.

February 25 (Fri.).—Institution of Railway Signal Engineers, at the London Transport Executive Signal School, Earls Court Station, London, S.W.5, at 6.15 p.m. "Typical Signal Control Circuits," by Mr. J. P. Loosemore.

February 25 (Fri.).—Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 6 p.m. Applied Mechanics and Internal Combustion Engine Groups, and Automobile Division: "Crankshaft Damping," by Dr. P. Draminsky.

### Railway Stock Market

Stock markets have continued to reflect uncertainty arising from the decline in American commodity prices and the reactionary trend of Wall Street. Prevailing belief is that the setback is only temporary, and with any rally by Wall Street, markets over here would respond quickly. On the other hand, there are fears that if the current trend in commodity prices is continued, a cut in Marshall Aid might become necessary. There have been heavy declines in commodity shares, particularly base metal mines, such as Rhokana, Zinc Corporation, and Rio Tinto, while oils lost further ground, Anglo-Iranian being no better than £8½ at one time, and Shell down to 70s, before showing a small rally.

Foreign rails have been steady, apart from Brazil stocks, which fluctuated sharply, reflecting conflicting City views of pending "take-over" developments. The official news of redemption of San Paulo Coffee 7 per cent. bonds, led to suggestions that the question of taking over the railways may be deferred; but Brazil will still have adequate sterling balances to acquire the railways.

After touching 116s. 3d. Great Western of Brazil shares came back to 110s. There has been a good deal of activity in Leopoldina Terminal debentures around 80. Leopoldina 4 per cent. debentures fluctuated around 83, while the preference stock eased to 34½ and the ordinary to 9½. San Paulo has been firmer at 157, but elsewhere, United of Havana 1906 debentures turned easier at 13. Canadian Pacific (£20½) reflected the setback in dollar stocks, while the preference receded to 78½ and the 4 per cent. debentures changed hands slightly over 110. Manila Railway "A" debentures have been more active around 87.

In other directions, Antofagasta (9½) and the preference stock (58½) remained firm, but Nitrate Rails shares lost 2s. 6d.

at 67s. 6d. Mexican Railway 6 per cent. debentures moved a point down at 86½. Taltal £5 shares have changed hands around 15s. 6d. and Buenos Ayres Central second debentures at 20. Quotations for debenture stocks of the Uruguayan railways have now been taken out of the Stock Exchange list in view of their expected "pay-out" in April. Central Uruguay ordinary was at £12.

Before going "ex" the £5 capital return, Thomas Tilling were quoted at 125s. 9d. In their new form, the shares are likely to be a lively market, some estimates being that they are probably worth 30s., taking more than a short view. B.E.T. deferred stock, which invariably moves closely with the market trend, has fallen sharply to £1,850 at the time of writing, but generally changes in road transport shares were small.

There was again a good deal of activity in colliery shares, interest in which was stimulated by latest market estimates of compensation values, although they will not be decided finally for another two years or more. Among colliery share movements. Wearmouth have rallied to 47s., Cortonwood to 36s. 9d., Shotts to 45s. and Glass Houghton to 26s. 6d. On the other hand, Doncaster Amalgamated fell sharply to 19s. and Staveley were back to 88s. 6d. Iron and steel shares have been a steady feature, price movements not exceeding more than a few pence. Hadfields were better at 31s. 3d. on the financial results; the directors claim that the company should not be nationalised, and the reference in the report that on balance-sheet figures, the 10s. shares have a break-up value of over £3 compared with the nationalisation compensation of slightly over 30s.

Among shares of locomotive builders Beyer Peacock were 24s. 1½d., Gloucester Wagon 58s. 9d., North British Locomotive 22s. 10½d., and Vulcan Foundry 26s. 3d. Charles Roberts on capital return estimates were active up to £7½.

### Traffic Table of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date			
				Total this year	inc. or dec. compared with 1947/48		Total	Increase or decrease		
							1948 9			
South & Central America	Antofagasta...	811	6.2.49	£ 68,420	+	£ 14,410	5	£ 384,040	+	£ 81,750
	Bolivar ...	174	July, 1948	\$28,960	-	\$69,357	30	\$471,287	-	\$301,893
	Brazil ...	...	...	32,712	+	2,978	18	593,105	-	7,652
	Cent. Uruguay ...	970	6.11.48	34,398	-	974	26	214,237	+	16,518
	Costa Rica ...	281	Dec., 1948	32,515	+	6,915	52	338,423	-	12,377
	Dorada ...	70	Dec., 1948	42,100	+	800	4	168,500	-	17,200
	G.W. of Brazil ...	1,040	29.1.49	\$1,168,700	+	\$45,700	52	\$13,333.9.0	+	\$257,513
	Inter. Ctl. Amer. ...	794	Dec., 1948	\$110,296	+	\$32,218	4	\$110,296	+	\$32,218
	La Guaira ...	22½	Jan., 1949	50,324	+	12,190	5	249,512	-	61,572
	Leopoldina ...	1,920	5.2.49	19,608	+	3,123	12	67,355	+	16,721
	Midland Uruguay ...	319	Sept., 1948	15,188	+	5,771	4	30,253	+	7,150
	Nitrate ...	382	31.1.49	5,686	+	1,213	12	16,335	+	1,989
	N.W. of Uruguay ...	113	Sept., 1948	£102,650	+	£35,245	31	£3,235,251	+	£1,188,233
	Paraguay Cent. ...	274	4.2.49	223,166	+	42,592	31	1,383,296	+	176,604
	Peru Corp. ...	1,059	Jan., 1949	c180,000	+	c24,000	22	c509,000	+	c37,400
	Salvador ...	100	Nov., 1948	9,915	+	1,045	31	57,335	+	7,725
San Paulo ...	153½	5.2.49	\$373,176	+	\$46,129	31	\$6,842,155	+	\$2,714,806	
Taltal ...	156	Jan., 1949	1,072	+	52	12	3,308	+	111	
United of Havana ...	1,301	5.2.49								
Uruguay Northern ...	73	Sept., 1948								
Canada	Canadian National...	23,473	Dec., 1948	11,254,987	+	1,630,242	52	122,817,487	+	13,267,992
	Canadian Pacific ...	17,037	Dec., 1948	7,769,250	+	618,000	52	88,812,250	+	9,165,750
Various	Barsi Light*	202	31.1.49	25,642	+	2,497	44	272,310	+	22,852
	Beira ...	204	Nov., 1948	128,810	+	18,938	9	255,148	+	29,260
	Egyptian Delta ...	607	31.12.48	23,691	+	769	39	556,626	+	109,817
	Gold Coast ...	536	Dec., 1948	253,671	+	50,133	39	1,902,032	+	510,000
	Manila ...	...	...	...	...	...	...	...	...	...
	Mid. of W. Australia ...	277	Dec., 1948	32,105	+	4,664	26	175,849	+	40,349
	Nigeria ...	1,900	Nov., 1948	495,323	+	70,029	33	3,677,496	+	716,766
	Rhodesia ...	2,445	Sept., 1947	643,980	+	102,833	52	6,787,603	+	612,938
	South Africa ...	13,347	15.1.49	1,380,223	+	63,489	42	55,704,538	+	3,452,080
Victoria ...	4,774	June, 1948	1,358,791	+	248,144	52	—	—	—	

\*Receipts are calculated @ 1s. 6d. to the rupee